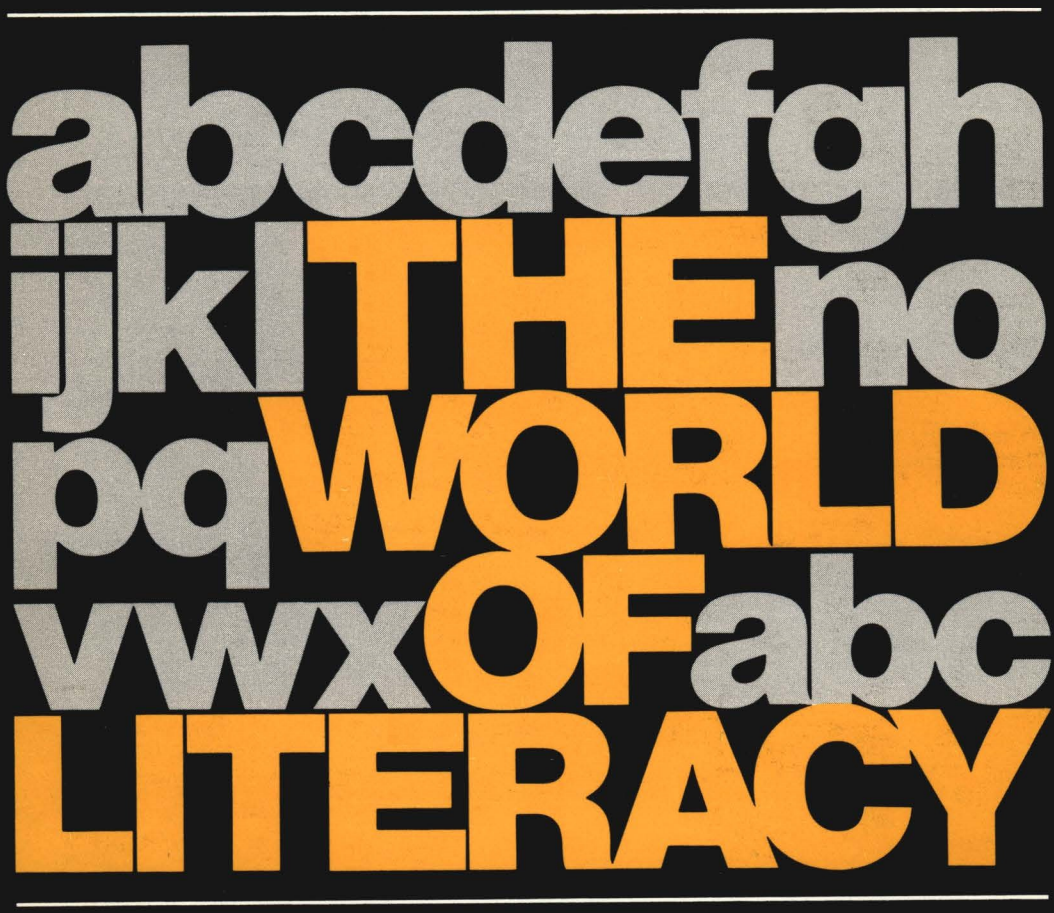
The World of Literacy

policy, research, and action



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The World of Literacy

Policy, Research, and Action

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Foreword

Beyond its support for new research, IDRC has been convinced for several years that there is much value in thinking through the implications of completed research. Too often, research results do not get drawn together, especially when they derive from different regions, different languages, and different disciplines. Within the sphere of education, therefore, IDRC has formed the Research Review and Advisory Group.

In the course of the group's work, it has found that research synthesis and analysis is even more necessary in the Third World than in the industrialized countries. Frequently, in the former, the irregularity of communications, of conferences, and of scholarly journals means that research results are sometimes unknown even in the country where the research was done, let alone neighbouring countries and regions.

This review of what is known from literacy research is very much in line with IDRC's concern about learning the lessons of research. The International Council for Adult Education, who carried out this review, were faced with a particular set of problems, however, in tackling their mandate. For one thing, research on adult education and on literacy has a much shorter pedigree than research on other areas of education such as child development, education and social class, education and employment, or higher education. Until very recently, literacy was primarily a sphere of action rather than analysis. The great names of the literacy world have been primarily activists and not a separate corps of academic analysts, a good example being Paulo Freire whose contribution to the literature continues to be influenced by his significant involvement in literacy action in West Africa's Portuguese-speaking countries. Only very occasionally has there been organized a major piece of experimental research designed to test hypotheses. The most notable example was UNESCO's Experimental World Literacy Programme launched in the mid 1960s and evaluated 10 years later. Not surprisingly, the EWLP results are given considerable attention in this review.

Precisely because literacy work is not a routine part of education provision but tends to be the result of an individual or a national commitment, it becomes difficult to avoid the conclusion that literacy is not generally given due attention in the world except where countries, individuals, or voluntary bodies take it up as a cause. To some extent, therefore, this book documents the state of national commitment over the last 20 years — hence the frequent mention of China, Cuba, Tanzania, India, Vietnam, Iran, Algeria, Mali, Brazil, and Somalia.

It goes beyond that, however, and brings to bear on many of the operational aspects of literacy a fund of good common sense and experience. Common sense is used advisedly, because the authors regard their insights and guidelines as flowing not from some vigorous sifting of research

findings but from the changing consensus among those who make literacy action their daily business.

Perhaps because there is not a time-honoured gap between literacy practitioners and literacy researchers, it is not surprising that the field of literacy has thrown up many challenges to the traditional processes of research. It is noticeable that many initiatives in making the community and the ordinary teacher participate in the research activity have derived from literacy research.

This book captures some of the beginnings of these new research methods but it sets out these and all its other conclusions with its eye on the policymaker, literacy trainer, and educated activist. This should prove a useful analysis of what has been learned in the 1960s and 1970s, and a valuable anticipation of the problems and methods for the 1980s.

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Introduction

Literacy is not an end in itself. It is a fundamental human right, and a means to development.

> . . .Literacy, like education in general, is not the driving force of historical change. It is not the only means of liberation but it is an essential instrument for all social change (Declaration of Persepolis September 1975).

The end of the 10-year UNESCO/UNDP Experimental World Literacy Programme in 1975 marked the beginning of renewed international and national reflection on literacy, its possibilities, and its limitations. This review is a contribution to the ongoing reflection and reevaluation and is based on three assumptions:

- Regardless of what development planners, educational researchers, economists, or assorted academics say or find through study and analysis, the political leaders in socialist and nonsocialist, industrialized and nonindustrialized, developing and developed nations alike view literacy as a political right, governed in the political arena.
- While debate and discussion continue, the number of illiterates continues to grow. By the year 2000, according to one projection, there will be about 1 billion persons who cannot read and write.
- Universal literacy, if it is to be accomplished, is not solely the task of either formal schools or adult literacy programs; it requires coordinated efforts from both. To date, with some exceptions, the schools alone have not been sufficient to the task, and literacy programs for those out of school have also been inadequate. In some socialist countries, such as Tanzania, Vietnam, and China, schooling for both adults and children has been well-provided for; also in Brazil, a capitalist country, education programs have been well coordinated through the Brazilian Literacy Movement (MOBRAL), a literacy foundation.

Nature of the Study

In 1975, when this review was begun, a number of evaluations and reviews of literacy and adult basic education were becoming available. The UNESCO/UNDP literacy project was being evaluated, and there were papers being prepared for the Persepolis Symposium (1975). Work by Brooke and Griffiths on Canadian and U.S. adult basic education (Brooke 1972; Griffiths 1970; Bataille 1976) was receiving attention, and the World Bank's Education Sector Working Paper (IBRD 1974) had placed increased emphasis on nonformal education. The International Institute for Adult

Literacy Methods (IIALM) in Tehran was just expanding its activities in research and documentation. The lessons, agreements, research results, and evaluations of all those studies are the subject of this review.

Inevitably, the reports and documents have continued to flow. Both the *Sourcebook on Teaching Reading and Writing to Adults*, edited by Carla Clason-Höök, and the study on *Language and Literacy* by Thomas P. Gorman, published by IIALM, are important additions to the literature that have not been dealt with fully here (IIALM 1977; Gorman 1977). We briefly reviewed these materials and did not find any major contradictions to our findings. In fact they reinforced some important assertions. For example, Weber, in the Gorman book, noted: "there is little in current research that might be directly applied toward teaching adults to read" (Weber 1977, p. 9), underlining one of our unexpected findings: researchers working on the question of literacy for schoolchildren overlap little with those working on adult literacy. In comparison with other issues in social sciences, little support has been given to research on adult literacy. The UNESCO/UNDP Experimental World Literacy Programme in 1965 was a first in research and evaluation, but even the cumulative efforts of the EWLP have not created the base for major decisions about literacy.

This review, building as it does on all the main documents about adult literacy, recognizes that research has been marginal to literacy decision-making. The decisions have always been political, and debates about whether or not literacy contributes to egalitarian development, how literacy affects development, etc. are virtually ignored in the political arena.

Often, literacy strategies and decisions have been agreed at international workshops, seminars, and meetings where the positions put forward are combinations of research, philosophy, and politics.

Areas of General Agreement

Our review has identified a number of issues around which there is a growing consensus. We find general agreement, for instance, that literacy programs must be fully integrated — politically and economically — into development planning. Designing literacy programs is not just a question of how to train the largest number as quickly and as inexpensively as possible; it is an expression of the social structure in which learning takes place. In September 1975, at Persepolis, Iran, participants at the meeting went so far as to specify the structural conditions that would be most favourable to literacy. They included conditions that allow every citizen to participate in decision-making at all levels; those that aim at endogenous and harmonious economic growth; those that do not make education a class privilege or a means of reproducing established hierarchies and orders; those that provide communities with genuine control over their chosen technologies; and those that favour concerted action and permanent cooperation among the authorities, especially in agriculture, health, family planning, etc. (Bataille 1976, p. 274).

The success of literacy programs is closely connected with national political will; it is achieved when most of the people within a nation can read and write. The experiences of Russia, Vietnam, Brazil, Cuba, and to some extent Tanzania have indicated that success is possible using many different

methods and investing vastly different sums of money. However, political will is essential. According to Amadou-Mahtar M'Bow, Director General of UNESCO:

> . . . Victory over illiteracy can only come from the political resolve of the country concerned. There is clear evidence that whenever a government has tackled the problem because it was a precondition of other social changes, the results have been favourable.

Literacy is functional when it arouses in the individual a critical awareness of social reality, enabling him or her to understand, master, and transform the reality. "Functional literacy" means more than the ability just to function economically and should not be tied exclusively to such things as growing cotton. In fact, evidence from the evaluation of the Experimental World Literacy Programme indicated: "to be effective, functional literacy should deal with political, cultural, and social aspects of development as well as purely economic ones" (UNESCO/UNDP 1976, p. 35).

In our review of the literature, we found some consensus on determination and refinement of systems, approaches, and methods for helping people learn literacy skills:

- Whenever possible, teaching and teaching aids should be in the mother tongue. Both children and adults learn to read more quickly and effectively when taught in the language they are most familiar with. Sometimes, however, using another language is desirable or logical, for example, when it serves as a strong political and unifying force, or when the mother tongue is so limited that follow-up is impractical or impossible. Nevertheless, reading comes faster if first done in the mother tongue and then transferred to a second or third language.
- The age at which a child enters a beginning reading program seems less significant than his or her stage of readiness; similarly there is no upper limit to the age at which a person may learn to read, although failing eyesight must be taken into account when dealing with older persons.
- Teachers need training in introducing discussion topics and in relating subject matter to local conditions; however uncertified teachers, volunteers, or others who are like the learners in a cultural or class sense may be as effective in literacy teaching as those who have had formal training. In one country, teachers and technicians were both given training to teach a functional literacy course; later their performances in teaching the course were compared. Although the teachers seldom became useful in teaching technical activities, the technicians, i.e., the agricultural extensionist or the community development assistant, often became quite proficient in teaching literacy. In other words, we may have been thinking along the wrong lines in adult — and perhaps child — education for some time.
- Teaching methods that cater to the learner's "felt needs" are most effective. "Motivating the learner" is a phrase often applied to approaches that accurately assess community and individual needs and then relate teaching to them. Paulo Freire in his work with adults and Sylvia Ashton Warner with children have impressively demonstrated the concept.
- The efficacy of linguistic methods differs according to the language being taught. For example, the syllabic approach used by Freire technically fits Spanish, Portuguese, and Kishwahili but is perhaps not as suitable for

English, German, or Arabic. The key to effectiveness lies in combining a method that fits linguistically with one that is directly concerned with needs.

Issues

Despite consensus around some issues, many questions are still being asked:

Is there a minimum threshold of education and/or schooling that guarantees skills?

A search is under way to establish the minimum education needed to guarantee permanent retention of literacy skills. This search seems to be part of a larger attempt to identify minimum packages to meet basic human needs. The World Bank is investigating whether 4 years of schooling is enough, but evidence, thus far, indicates that a minimum is almost impossible to define unless all other factors involved in literacy retention — such as individual or collective need for reading, the availability of reading materials, the type of instruction provided, the language being learned, or the type of teacher training provided — can be held constant.

Another way of looking at the question is whether reaching a certain percentage of a nation's population can guarantee sustained growth in literacy. Perhaps 60–70% is a minimum, although countries such as the U.K., the USA, and Canada, all with more than 70% literacy, still have illiterate residents.

What is the balance between adult literacy programs and mass expansion of primary education?

The approaches and methods to bring about universal literacy have not been agreed internationally, but we conclude that programs of basic educa-

In Tanzania, the national emphasis for literacy training was originally adult education. As the adults gained literacy skills, they began to call for similar opportunities for their children.

tion for all ages are essential. The vast numbers of unschooled children and the almost equal numbers who drop out of primary schools before attaining even minimum skills of written communication provide little support for the hopes of some ministries of education that illiteracy will be cured by primary schools or by a national compulsory education act. Adult education literature generally asserts that educated households and educated parents encourage their children to stay in school, and school attendance statistics for children of schooled or literate parents are higher than for children of families without formal education. How much is dependent on adult literacy rather than income or class or position in the social structure is not clear.

Primary education needs to be balanced with adult education.

One thing is clear, however: a high literacy rate among the adult population encourages provision of primary education despite limited resources. For example, in Tanzania, a mass literacy campaign was begun in 1971, and by 1975, adult literacy had been raised from roughly 25% to about 60% (Mbakile 1976). A side effect was that the adults strongly pressured the government to expand primary education, and by November 1977, enough schools had been built to accommodate every child in the nation. Teachers were being trained rapidly through the use of correspondence materials and face-to-face short sessions. The achievement is especially remarkable because Tanzania is one of the 25 poorest nations. It will be important to see whether Tanzania's experience is repeated in Mozambique and Guinea-Bissau, where extensive adult literacy and political education campaigns are under way.

The balance between adult and primary education probably varies, but the need to balance the two focuses is universal and is clearly spelled out in an Indian government policy statement, which reflects the general tone of this review:

> . . . While determined efforts must be made to universalize elementary education up to the age of 14 years, educational facilities must be

> extended to adult population to remedy their educational deprivation and to enable them to develop their potentiality. Indeed, universalization of elementary education and of adult literacy are mutually inter-dependent (India, Government of 1978, p. 21).

How worthwhile are research and evaluation methods that are currently used in literacy work?

The Experimental World Literacy Programme and several papers from the Persepolis meeting in Iran pointed out the weakness of present evaluations and research reports in interpreting learning. For example, a list of social indicators had been drawn up to evaluate functional literacy, and it included the amount of consumer goods purchased since the program began. The implication is that success is a measure of the amount of money that is transferred from the agricultural producers to the producers of radios and motorbikes. The discomfort with present research methods permeates social sciences generally, and increased attention is being given to methods that directly involve the people in the research and problem-solving.

The least that can be said is that the most commonly used psychometric approaches to research and evaluation oversimplify reality and, perhaps still more crucial, they serve scant purpose when trying to involve people in development programs.

Added to their inherent weaknesses, evaluation approaches are often directed toward fulfilling too many objectives. For instance, in the large-scale evaluation of UNESCO/UNDP programs, there were three objectives: to measure the efficacy of program methods, to monitor the program internationally, and to justify the expenditures.

This review is aimed at active practitioners in education or related fields; it has been written for administrators and students of literacy and education who are not necessarily professional scholars or researchers. It interprets a vast amount of literature about literacy. Over the past 15 years alone, thousands of persons have gained new insights and experiences in literacy work. In 1965, at the start of EWLP, it was virtually impossible to find anyone with any relevant research and evaluation experience to fill positions in the early projects; now there are perhaps hundreds of persons who have had literacy evaluation or research experience. The bulk of the world's literacy specialists come from Third World countries and are now sharing their experiences with their colleagues in other countries. From these persons have come the lessons in this review and to them are directed the findings and conclusions.

Part 1

Factors in the Achievement of Literacy

There is no single plan or established set of rules that can guarantee literacy in every country; however, the experiences in the past 10 years and longer in some 40 nations in the developing world — as well as the historic patterns in developed countries — provide practical insights and possible strategies.

Research results and descriptive evaluations have indicated some general principles or conditions that are most likely to ensure achievement and retention of literacy. These principles derive from broad and interconnected decisions; within each principle are sets of factors that are equally important but that vary in their importance in each country and program. The combination or "orchestration" of the principles and factors seems to explain the success or failure of literacy programs in both contemporary and earlier times.

First is the principle of national commitment. The achievement of literacy should be a stated and supported policy of a national plan for the economic, social, and political goals of a country. The literacy policy should be planned with specific goals that can be met and evaluated within a realistic time. Problems common to many programs are that they have been overly ambitious; lack clearly detailed objectives; and/or are weak in preparation, identification of needs, allocation of money, and assessment of available organizational and personnel resources.

There has been considerable discussion about "national will," which is not a very precise concept and has sometimes been used almost exclusively as an attribute of socialist countries. Although many gains in literacy have occurred in socialist countries — the Soviet Union in the 1920s and 30s and more recently Cuba, China, Vietnam, and Somalia — countries with quite different social systems have achieved national will and have had successes in literacy: Wales in the 18th Century, the Scandinavian countries in the 19th Century, Japan in the early 20th Century, and Brazil in contemporary times.

The second principle is that of popular participation: The value and objectives of a national literacy program must be viewed by the target group as being relevant and useful to them and their community. The participation of people in determining the content, levels of competence, and methods of learning should be part of national development strategies, which themselves should derive from a popular base. If literacy programs are imposed on people and are not related to total development and/or local conditions, they have little chance of improving people's lives. They should encourage the skills of participation and self-management, respecting and drawing on indigenous cultures.

The third principle is coordination. The administrative tasks in implementing a national policy involve various ministries, institutions, industrial enterprises, trade unions, government organizations, and individuals. They

need to be coordinated centrally but be flexible enough to ensure local responsibility, communication, distribution, and evaluation. A single, central body should oversee coordination. It should be part of a national structure for formal and nonformal education so that literacy is regarded and practiced as one element in an ongoing plan for continuing education.

Fourth is the principle of mobilization, which includes preparing learner-based curricula and materials, obtaining media support, encouraging volunteers, setting up counseling and information services, and initiating systems to aid retention and application of literacy. Mobilization demands the recruitment and training of personnel for administrative and teaching duties at national and local levels. It is most effective when supported by political, religious, cultural, trade union, and voluntary organizations as well as institutions of education and research. Mobilization implies an infrastructure of educational services for literacy campaigns and follow-up.

The first two principles are "political" in that they derive from government policy and are based on the relationship between the governing and the governed. The degree to which this relationship is based on open dialogue and mutually identifiable goals — and trust in those goals — determines the climate in which literacy programs operate.

The second two principles can be called technical in that they determine the managerial implementation of the first two principles. Coordination and mobilization establish the level of literacy skills to be achieved, retained, and used. In this sense, they incorporate two less clearly identified principles: motivation and entitlement.

Motivation is based on the learner's hope and expectation concerning a better life. People who are reasonably optimistic that conditions will improve for them (and their children) more readily adopt changes than those who are not. This has been exemplified in family planning campaigns. Expectations have rarely been commented upon or studied directly in literacy research; yet they are a part of most or all literacy successes.

Entitlement is the final principle. It is, more accurately, an assumption that every human being, by right, is entitled to a basic education. This principle colours everything else that is done and instills a sense of purpose and urgency to all the measures and tasks analyzed in this review.

It should be noted that principles and factors that need to be balanced are sometimes perceived as dependent or as opposed. For example, there has been much debate between those who argue that development is endogenous — arising from the economic, social, cultural, historical, and political circumstances — and those who urge international action to foster development. The views are not in conflict: national development, like individual development, arises from both nature and nurture. Similarly, literacy programs must be a product of the cultural environment but may benefit and even result from international cooperation.

Planning

The first step in designing literacy programs is to decide the objectives; next is to identify the kinds of resources available, how they are organized, and how to mobilize them. Planning should make it possible to:

- Carry out basic studies and determine who would benefit most from functional literacy;
- Analyze training requirements;
- Seek adequate means for translating requirements into targets;
- Organize the methods of training;
- Begin briefing and training instructors; and
- Then, and only then, start the classes.

An example is the planning conducted by the research unit of the Women's Organization of Iran, in developing its Saveh Functional Literacy Project. The four major operations, or sequences, in which the project was conceived, realized, and evaluated were described by Homayounpour (1975):

- Situational analysis and the determination of program objectives;
- Translation of program objectives into instructional materials;
- Internal coordination and the mobilization of external resources for the achievement of program objectives; and
- Design of evaluation and of its uses for program management.

> ...Those experienced in the operation of experimental education projects will realize that the logical ordering of the operation is a reconstructed logic which bears only an approximate relationship to reality. In practice, the education development process is circular and repetitive. One may begin with situational analysis but the situation will change and the analysis of it deepens as the project progresses. These changes will redefine the program objectives and the tasks before those preparing the instructional materials (Homayounpour 1975, p. 37).

Goal setting, the methods used, the scale used, the levels of centralization that are appropriate depend on the objectives of the program. Goals differ and may include increased crop production; improved industrial productivity; increased commitment to national policies; participation in decision-making; increased consciousness about the social and economic relations in society and the individual and collective role in change; and support for government policies. Or, the goals may simply be to provide literacy services to as many people as possible.

Preparation Time

If the goal is to provide functional literacy, then considerable time must be set aside for research, preparation, and briefing. Whereas preparations for traditional literacy programs were primarily to translate, adapt, or write a primer or a single textbook, current programs demand much more. An organizational structure needs to be set up, and if literacy is part of an integrated development program, the preparations take at least 1 year, according to evaluation reports. The length of time depends upon the organizers' previous experience but is generally greater than was originally anticipated.

The experience of India in planning and preparation is instructive. In October 1978, the country inaugurated a National Adult Education Programme (NAEP), with literacy as an indispensable component, for approximately 100 million illiterate persons aged 15–35. The period January 1978 to March 1979 was treated as "the period of intensive preparation" for:

- Stepping up of the program from the existing level of 0.5 million to at least 1.5 million in 1978–79, and the creating of an environment favourable to the launching of NAEP;
- Preparation of case studies of significant and relevant past experiences of both successes and failures;
- Detailed planning of segments of the program by expert groups, including detailed plans for each state and union territory;
- Establishment of necessary structures for administration and coordination and necessary modifications of procedures;
- Identification of agencies, official and nonofficial, and of the needed level of their involvement;
- Clarification of the required competence, particularly in literacy and numeracy, which would form part of all field programs;
- Development of capability in all states for preparation of diversified and need-based teaching/learning materials;
- Development of training methods, training manuals, and actual training of personnel at various levels;
- Creation of a satisfactory system of evaluation and monitoring and of the required applied research base (India, Government of 1978).

One preparatory task that may take particularly long is eliminating traditional views (Dumont 1973) of learning to read and write as an end in itself; as a formal classroom activity; or as a vocational activity outside the social context. For example, a planning team in Mali found that, because of traditional views, engineers and technicians in development areas were not easily convinced that literacy instruction could improve the ability or working conditions of the peasants (Dumont 1973).

Operational Seminars

Workshops of 2–3 weeks are used more and more to bring about unity on objectives and methods, to identify problems, to develop organizational frameworks, and to ensure that all concerned know what the program is about and how responsibilities are assigned. They have been used by Pakistan, Somalia, Turkey, and Mali. Seminars are usually held at national

and administrative levels, and more and more they are being extended to the local level to include illiterates. They have been found to be most effective when held at regular intervals throughout both planning and implementation stages. Their effectiveness, however, depends on the ability of program administrators to encourage honest input from all the participants. Preparation and planning prove their worth when a planning team is forced to explain clearly what the literacy program and its expected outcomes are to audiences such as the manager of a factory, economic development officials, teachers, village leaders, or illiterates.

The evaluation of the Kenya Functional Literacy Project (Somerset et al. no date) indicates the powerful role of planning and long-term goals. It also shows the importance of publicizing goals so that field officers know where they fit into the whole program and how and why they must coordinate with other ministries. The evaluation states that if project committees don't plan for cumulative stages of a project over 2–3 years, they set unrealistically ambitious goals and give little thought to the follow-up.

Long-Range Planning

A sharper focus on planning and on the organizational structures for the implementation of national programs is apparent in recent long-range plans for basic and/or nonformal education.

For example, the National Adult Education Programme for India has plans to cover the entire population in the 15–35 age group by the end of 1983–84 but realistically states that the yearly stages of the 5-year plan are but "effective targets." The long-range aim, by 1983–84, is the *capability* to organize adult education programs. "The aim then would be to strive for a learning society in which lifelong education is a cherished goal" (India, Government of 1978, p. 3).

Another example of long-range planning is the proposed 7-year plan for Afghanistan, which appears to summarize the lessons learned from global experiences of the past 10 years, calling for:

- Analytical and objective data about the educational needs of various groups based on surveys and studies;
- Designing of diversified and problem-oriented curricula and learning and teaching materials;
- Development of appropriate technological techniques to achieve adult participation in the learning process;
- Trained and professional personnel at all levels and stages of the program; and
- Coordination with other agencies that are concerned with the upgrading of human resources as part of the development process (Afghanistan, Government of 1975).

Administration of the Afghanistan program is the sole responsibility of the Directorate of Adult Education, under the Ministry of Education. The Directorate includes six technical departments: functional literacy, reading materials production, orientation, training, field operations, and women's education. Provincial units are to be set up to support the Directorate, and the selected target groups are rural agriculture, farmers and cooperatives, women (urban and rural), and urban people. The educational programs are to be problem-oriented and environment-related.

Organization and Administration

Research has demonstrated that the problems facing literacy programs are not those of pedagogy or sophisticated methodology. They are largely organizational, administrative, and structural, stemming from the lack of mechanisms to train literacy teachers, distribute learning materials, implement and support effective teamwork at the project level, etc.

Evaluation of the first phase of the Saveh Functional Literacy Project in Iran underlined:

> . . . The principal determinant of the success of a literacy program, whether mass or selective in scope, is its capacity to mobilize the required resources and implement effective coordination and central mechanisms. Questions of method, while important, are secondary to organizational requirements. This lesson suggests that much more attention needs to be paid to developing and maintaining efficient organizational mechanisms (Homayounpour 1975 p. 29).

Coordination among ministries, departments, and agencies lies at the heart of literacy programs and hinges upon clear delineation of roles and responsibilities. The status and ego of all participating groups must be untangled in the planning stages so that everyone knows which organization or ministry has the administrative and financial mandate for a program and how responsibilities are assigned to allied ministries and/or associations (UNESCO 1970). Otherwise, administrative mixups are inevitable and may even mean failure for a literacy program.

Coordination and, in fact, all administrative tasks are simplified when there is well defined and positive status given to literacy programs. Iran, Senegal, Jamaica, Mali, and Tanzania, all have ensured administrative support by placing the eradication of illiteracy among the priorities of the country.

Experience during the Experimental World Literacy Programme (EWLP) indicated the importance of setting up a single structure (backed firmly by a central department or ministry) to coordinate both national and local levels. Early programs paid dearly for their lack of coordination: based on the assumption that the ministry of education would foster broad social and cultural development in literacy education and that economists and related ministries would support vocational training or the functional component, they ended in disaster.

Single Coordinating Structure

Thus, the consensus is that a literacy program should be coordinated by one single organization or structure. However, coordinating committees

alone have not proved strong enough to avoid duplication of effort and competition for funds; they need to be supported by a central organization with a clear mandate for its operation, status within government, and a budget sufficient to carry out coordination and decentralization in the field.

The example of Mali is pertinent (Dumont 1973). When embarking on the EWLP project, the government determined that the program would be national and would not have two separate organizations dealing respectively with the pilot project and the national campaign. It established a single National Functional Literacy Service (reporting through a general directorate to the Ministry of Education) responsible for all literacy activities headed by a single director; one national centre for the production and distribution of literacy materials; and a single network of regional directorates.

Jamaica has also recognized the need for a national coordinating structure. The report on the Jamaican national literacy program's media project (Martin 1976) recommended that the National Literacy Board, which administers the program (now called JAMAL), become a foundation and that JAMAL become the nucleus of an adult education coordinating body such as that recommended by the 1972 World Conference on Adult Education. The acronym stands for the Jamaican Movement for the Advancement of Learning not merely literacy.

Decentralization of Administration

Hand in hand with coordination are participation by groups at all levels and decentralization of responsibility.

Decentralization produces horizontal and vertical links in infrastructure. The horizontal links are at the national level and are between agencies, ministries, and departments; educational institutions; teacher associations; trade unions and cooperatives; service and professional organizations; industrial and agricultural enterprises; the vertical links are the local counterparts of such bodies, each group with a defined sphere of influence and activities so that village committees, such as those in Tanzania, Mali, Peru, and Somalia, contribute to and carry out their own decisions.

The necessity of decentralizing authority was underlined in the initial evaluation of Iran's literacy programs. The evaluators recognized that the system was overly centralized and that it delegated responsibility but not full authority in decision-making (Iran Committee for World Literacy 1977b).

The decentralization lesson was also learned by the Brazilian Literacy Movement (MOBRAL) launched in 1976 as a mass campaign. The movement had a highly centralized administration without the mandate to involve progressively lower administrative groups in decision-making and implementation — an unworkable structure that had to be revamped early. The structure was reorganized, and the upshot was that policymaking was undertaken at the national level and enacted at the municipal level. In each municipality, committees, which were linked by state coordinating bodies to the MOBRAL central office, mobilized local support and organized literacy activities.

Decentralization expands the personnel devoted to a program and is the key to engaging local participants, who include the target group.

People's Participation

No campaign, project, or program can sustain itself without participation of the people it aims to serve. Local support is essential, community members planning and implementing their own program. Recently, many countries have begun to stipulate in their policy planning that participation must be voluntary and that the people most concerned — the illiterate — must be stimulated on the basis of individual and community responsibility. At the Asian Seminar for Adult Literacy (1976) 17 countries concluded:

> ... So far, the majority of evaluation studies are mainly concerned with instructional materials, teachers and adult participants. There is lack of evaluative studies concerning the planning, organization, mobilization and forms of participation of the population. Several participants pointed out that there is a lack of adequate methodology for the evaluation of these aspects (INCADET 1977, p.106).

The Philippine Rural Reconstruction Movement (PRRM), a private, nonpolitical, and nonsectarian organization founded in 1952, has found that programs without community involvement rarely establish continuity or permanence. In 1970, PRRM introduced a functional education for family life planning project in the province of Nueva Ecija and began to establish links between institutions and services by mobilizing and training leaders on three levels: in the *barrio* (neighbourhood), municipality, and province. The *barrio* leaders were organized into popular education boards to develop and implement classes. In the municipality, community resource development committees were initiated to provide support for the boards through program coordination and financial assistance. At the provincial level, the Integrated Association of Nueva Ecija, composed of public and private community agencies and institutions, began to support educational programs. The groups at the three levels were administratively independent, but they depended upon each other for physical, financial, and human resources in the planning of adult education and literacy programs.

Formal or informal community groups such as cooperatives, unions, social centres, women's groups, youth organizations, traditional and religious fraternities can help promote mass participation; when they combine efforts with government employees such as teachers, health assistants, agricultural extensionists, and adult educators, the results are positive. In other words, literacy programs work well where an existing people-based network accepts responsibility for literacy action.

The trade unions in Iraq and Algeria, for example, are in the forefront of literacy training. In Iran, Israel, and the Soviet Union, organizational bases of the army have been used for literacy support, and in Tanzania, the village political committees have produced effective mass education campaigns. Young people have been mobilized for service in Nepal, Jamaica, Peru, Pakistan, China, Somalia, and Cuba, and women's groups in India, Iran, Angola, Israel, and Ecuador have been leaders in the cause of education for women.

In some instances, the work of such groups has been well-documented; in others, it has merely been described and not evaluated. How they operate,

In Ghana a community development program to build houses might have been a good starting point for a literacy program.

how their experiences and resources can be coordinated, and who else can learn from them are questions that still need to be answered.

The impetus for literacy campaigns may come from a dramatic event, such as a revolution or independence, that creates a driving force for political and social change or it may come from economic needs and social development policies that demand a change in traditional emphases. In either case, a clear and direct need arises for a larger number of people to acquire new knowledge, skills, and information to prepare for, achieve, and consolidate change; the role of a literate, trained, and informed citizenry is perceived as essential to the achievement of national goals.

The literacy campaigns are generally (and somewhat simplistically) described as either mass or selective. At conferences and in many articles, the two approaches have been likened to opposing camps, and there has been considerable debate about which is more effective. However, they are actually complementary and, when combined, appear to be most effective. Often, specialized programs extend mass campaigns by providing occupationally related training to selected groups. A good example is India, which has combined the selective and mass approach in its new National Adult Education Programme described as "a mass program with the quality of planning and implementation of a selective program" (India, Government of 1978, p. 5).

Whereas most programs begin as mass campaigns achieving basic literacy for the bulk of the population and then become more functional and selective, at times selective programs are expanded to promote basic and functional literacy throughout a whole country.

Iran's functional literacy program at Shahnaz Textile Factory is an example of the selective approach in literacy campaigns.

Mass campaigns have often arisen because of a sense of urgency, the needs of national development so acute, the ideology so committed to a popular base that the obvious starting point has been to mobilize the entire country to teach and to learn minimum reading and writing skills within 1–2 years. In many cases, there has been a shortage of financial resources and of trained personnel that encouraged the imaginative use of untrained teachers, the mobilization of certain literate groups such as young people or the army, and a delegation of responsibilities to local organizations. Often, campaigns have been a "cause" that has created (or maintained) a sense of national purpose, unity, camaraderie, and self-reliance.

A classic example of a mass campaign that was spawned in a revolution is the literacy program in the USSR. In 1919 it began with a mass mobilization of all sectors and ethnic minorities and with an illiteracy rate of 80–90%. The country successfully developed phased and selective advancement not only in literacy but in national economic, cultural, and social reconstruction. Soviet policymakers recognized that the neoliterate is still semiliterate in terms of educational competence for further and sustained education and civic participation. The full eradication of illiteracy took some 20 years and included a network for continuing adult education.

The Soviet experience is similar to that of the People's Republic of China and of the Democratic Republic of Vietnam. The Chinese mass campaign began in 1955 as part of a national program of agricultural and industrial advancement; starting from an 80–90% illiteracy rate, the country claims to have reached the majority of the 800 million people in 20 years, although neither the degree of literacy nor the literacy rate has been assessed by

outsiders. The Chinese literacy plan, like the one in the Soviet Union, incorporated selective phasing to extend training and education to successive sectors (Hsiao 1975).

In Vietnam, the entire population was taught how to read and write in 13 years, although the illiteracy was high and the task was carried out during a war (Lê Thanh Khôi 1976). Revolution was the driving force backed up by a decentralized organization through which local cadres took responsibility for literacy teaching. The campaign has been followed up with efforts to raise the educational level of the people and to educate minorities in their own languages.

In the Republic of Somalia, the adoption and transcription of Somali as the official language was the impetus for a mass campaign that was unique in that both the educated and uneducated had to learn to read and write the language. The country adopted a modified Roman alphabet for the previously unwritten language and, in 1973, launched a 2-year campaign (urban first, then rural) during which the schools closed, the villagers organized local programs, and literate young people taught the adults (Mohamed 1975).

The Selective Approach

The selective approach was chosen at the Tehran Conference of 1965 to be used in the Experimental World Literacy Programme, which espoused functional literacy and promoted a sustaining infrastructure for planned programs of further education. The target population in each country was large enough to be a challenge in organization on a national or regional scale but selective enough to permit testing of methods and materials.

In the selective approach, priority groups are those who have the greatest potential to improve a country economically and socially or who are perceived to be in greatest need of a development program incorporating functional literacy. As Dumont (1973) and UNESCO (1972) have noted, the selective principle is easy to imagine and awkward to apply. It entails a rational, explicable choice to launch a project or projects in one region and not in another or to focus on one group and not another. It works best as an answer to limited resources when tied in with a specific development and modernization project, when coordinated with large-scale adult literacy work already under way, or when used as a test of methods and structures for possible replication elsewhere. Selectivity can be part of a national or mass campaign based on phasing and priorities.

The selective approach is sometimes termed the selective-intensive approach, which implies, erroneously, that intensity is a component of the selective, functional program but not of the mass campaign. "Intensive" suggests concentration of several media and methods so that the learner attains, within a certain timetable, a standard of literacy that can be maintained. It usually refers to a standard of proficiency reflecting actual needs and conditions of the adult learner rather than the formal school system. The intensity is defined according to timetable, duration of classes, mobilization of resources (money and people), content, and methods.

A contemporary example of a phased and intensive plan within a national mass campaign is a 2-year (1966–68) pilot project in the Union of Burma, which experimented with organization, teaching materials, recruit-

ment and training of volunteer teachers, and postliteracy aids. The project produced practical experience for the launching, in 1969, of a mass campaign to be carried out in three 4-year plans. During 1969–72, literacy classes were extended from 4 to 34 townships; during the second 4 years (1973–76) the program was consolidated to include learning from the previous phase and was expanded into other regions. The third phase (1977–80) will extend literacy to the remaining townships. There has been a strong political commitment to the eradication of illiteracy, and the overall literacy policy is to produce a mass movement characterized by voluntary community participation and provision of local resources in a selected region. The program is coordinated by a central committee and implemented by literate youth and other citizen groups. It includes a component for postliteracy learning based on materials prepared from its beginning.

The approach in Algeria has been described as integrated-selective (UNESCO/UNDP 1975, p.17). The objective has been to integrate literacy with economic, social, and political development strategies, which are based on collectives, cooperatives, and worker-run enterprises. The need for literate workers to carry out economic and ideological policies was the starting point for a functional literacy project launched in 1967 and incorporated into the 1972–74 EWLP. The focus was industrial and agricultural sectors within the national plan; the teachers were recruited from the participants' co-workers; and the materials and methods were integrated with occupational needs. The experience has led to the adoption of a plan to integrate the total educational system, which, by 1985, aims to phase out the distinction between in-school and out-of-school education.

Summary

The amount of time and the degree of precision given to preplanning, to establishment of clear-cut objectives and time-based goals, and to delineation of tasks and organization determine the success of literacy programs. At least 1 year is needed to prepare for functional literacy programs, because they require more research, preparation, and mobilization than do traditional literacy programs. A program's capacity for mobilization and success is strengthened when its goals have been integrated into national policy and development plans; when a single coordinating body has a leadership mandate and assurance of continuing funds; when the national structure has a decentralized counterpart; and when the aim is to help people participate in the changing of their environment.

The organizational principles upon which literacy programs should be built include participation of individuals and groups at all levels; maximum decentralization of responsibility for implementation; preliteracy promotion through the media; development of an infrastructure for intersectorial coordination between national and local institutions, nongovernmental organizations, and popular groups.

The approaches used in literacy programs are usually referred to as "mass" and "selective"; they complement each other and can be integrated to produce an effective literacy program. Within a mass campaign, for example, selective functional literacy programs can be designed for specific groups with particular needs and occupations.

Personnel

The experiences of literacy organizers recruiting and training teachers — primary schoolteachers, technical instructors, and volunteers — have uncovered important questions for research and long-range planning and policy decisions:

- Should professional teachers be the sole or major recruitment base for the teaching of adult literacy? If so, what training should they receive to work with adults and the community?
- Should teaching be, or become, the prerogative of citizens who have been trained and certified by state educational institutions? Or, should the right to teach (like the right to learn) be extended to all citizens so that a broad range of skills, knowledge, and training can be identified and mobilized?

The decisions inherent in these two questions should be examined together; otherwise, they will become bogged down in the dichotomy of "professional" versus "nonprofessional."

Several criteria characterize the selection of literacy or functional literacy instructors. One is pedagogical, by which preference goes to professional teachers; another is functional — the need for technical competence — by which preference is for factory supervisors, agricultural agents, extension personnel. The influence of the instructors within the cultural and socioeconomic context of the learners is another consideration: previous experience has shown that the community's acceptance of a teacher bears significantly on learning advancement and class attendance. This criterion is most significant in programs that attempt to involve participants in planning, whereas the criterion of technical competence assumes greatest importance in selective programs aimed at specific goals in production. In programs where the goal is general improvement in methods or marketing, the need for special technical competence is not as intense. In other words, the need for technical expertise varies according to the sophistication of the curriculum materials.

In most countries, primary schoolteachers, particularly in rural areas, have been regarded as the preexisting cadre of literacy instructors because they represent an existing and easily identifiable infrastructure for government services. However, some countries (e.g., India) have found that progressive farmers and other educated villagers can be better adult literacy teachers than primary schoolteachers.

Other sources for teachers are cooperatives in countries such as Mali and Honduras and trade unions in Iraq, Syria, and other Arab states. The army is another source, which has been used by Iran, Israel, the Soviet Union. Literate youth have spearheaded literacy drives in Cuba, Somalia,

West Bengal, and Burma. The use of volunteers has been an integral part of literacy movements in Jamaica and Pakistan.

Research into the recruitment and training of instructors has shown that teaching work-oriented literacy is different from teaching basic literacy and should be undertaken by instructors with practical knowledge of industry or agriculture rather than by schoolteachers and volunteers.

When the teaching of literacy and the teaching of technical or vocational skills are integrated, a decision must be made whether the vocational component is important and specialized enough to require a teacher with practical knowledge in the field. When basic literacy and work-oriented literacy are taught as two stages, a schoolteacher may take stage one and a technical person, stage two. But rarely do developing countries have sufficient personnel to engage two teachers. The solution has been to devise ways by which technical persons and primary schoolteachers are trained to teach both basic literacy and vocational skills.

Experience has shown that the schoolteachers seldom become proficient in teaching the technical side of functional literacy, whereas the technicians (the factory supervisors or progressive farmers) become quite proficient in learning to teach literacy. The implication is that it is easier and more practical to train a technical person in techniques of basic literacy teaching than to train a primary schoolteacher, with no technical education, for the task of functional literacy instruction.

This finding surprises many commentators; however, it indicates a basic and self-evident premise that adult educators have long known about teaching and learning: an individual is a more successful teacher (learner) when the subject being taught (learned) is related to an area of previous experience and competence. Literate technicians have only to learn the methods and techniques of teaching two things they already know: the particular skill and reading and writing. Nontechnical people, such as schoolteachers, must learn the methods and techniques of teaching a new clientele (adults) as well as the technical content.

In September 1976, UNESCO held a symposium on the contribution of persons other than teachers to education. The working paper from the symposium states: "the basic assumption underlying the concept of life-long education is that anybody can be an educator" (UNESCO 1976c, p. 15); the paper goes on to say:

> . . .the harnessing of all available forces, a recourse to all adults with knowledge at their command as potential educators, and the cultural contribution of community-based organizations are all part of new strategies for a form of life-long education which will provide something more than a second chance and will not perpetuate the present compartmentalization of society or strengthen the existing educational dualism (UNESCO 1976c, p. 11).

Teaching at the Work Place

When literacy training is an integral part of a technical development program and is directed toward workers employed in factories, it should be part of an overall training plan for each enterprise and it should be undertaken by production workers who are given training to be the teachers.

When the work place becomes the teaching place, the project must be planned in full consultation with the supervisors and managers of the enterprise or factory. Otherwise, according to Furter (1973), management may regard the literacy training as a threat. In Iran, for example, training programs for workers heightened irritations between managers and various occupational groups, with managers seeing training classes as "subversive elements invading the shop floor." The result in one case was that workers were not given a bonus for learning to read and write, despite a law stipulating a 5% wage rise and they were not considered desirable persons to promote within the enterprise.

The kind of conflict that can arise when management is not fully in accord with functional literacy for its workers is described by Furter:

> . . .as in the case of the worker, who, having asked a technical question of his foreman and received no reply, told him the answer which he had learned recently in the functional literacy class. He then walked out of the factory declaring that he could no longer take orders from an ignoramus . . . .

Furter concludes that literacy classes are most successful when they are one component of a training program for all personnel, including managers.

> . . .It is absolutely essential to re-train, if not simply to train, foremen and charge hands as well, and at the same time as the workers, to win over the middle-management personnel who can often show considerable cultural resistance towards the world of their subordinates, and in particular, to take steps to put management in the picture.
>
> Such activities, although they go beyond the limits of the pilot project, could nevertheless find a place in that project, provided it starts from a specific problem (for instance, the preparation of standardized technical vocabulary in Persian which could play a very important part in the integration of language into technical training) (Furter 1973, p. 23).

Relationship to Learners

The attitude of the teacher to learners is regarded as the most important factor in the learning process coupled with the attitude of the learners toward the teacher. The key is mutual trust. Teachers are more successful when they create a positive atmosphere that learning is possible and that literacy learning is a joint teacher-learner relationship. The rapport between teacher and learners is strongly influenced by the teacher's involvement in the life of the community. It was found in Burma and Somalia, for example, that when volunteer teachers lived, worked, and taught as part of the village community, illiterates were more receptive to attending classes than they were when teachers lived far away from the village. Adults adjust more readily to classes taught by someone who knows and understands their cultural and social conditions. Projects in Pakistan and the Philippines have shown that dropouts decline dramatically when community people are trained as teachers. In Burma, volunteer teachers from outside a region have been shown to provide momentum to literacy campaigns but the local literates are more acceptable and, therefore, more successful as teachers.

However, adults accept their peers as teachers only when the latter receive some special training; otherwise, the students wonder how they can learn from someone who is just like them. The best instructor is one who is from the same cultural milieu as the students, but at a level immediately above them in the field of instruction and in professional expertise. In Jamaica, the most successful literacy classes, in terms of attendance, continuity, and progress, have been those in which the teachers' relationship with the students and the community is more than just a professional encounter (Elliston 1976).

The sense of confidence that nonthreatening situations creates between teacher and students underlies all learning, whether for adults or children. The balance between the teacher as authority and the teacher as facilitator is not easy for an untrained person to maintain, particularly when his or her own education and even the expectations of the community favour an authoritarian teacher. Status and acceptability within the community is important for teachers of both adults and children, although teachers from outside may be successful if they have backgrounds similar to their students and demonstrate a commitment and enthusiasm for working with the village.

The ALFIN project in Peru (Lizarzaburu 1976) found that literacy teachers of modest social origins, with some experience working with the masses, obtained good results, although they suffered initially from a lack of first-hand knowledge of the rural people. They had been recruited and trained to be animaters and social activists first and teachers second. They identified with the people and proved to be better literacy teachers than did university students or schoolteachers in general.

Volunteers

Volunteers for literacy programs in developing countries have illustrated the rich resources of commitment and talents that exist and can be tapped for service when paper qualifications and diplomas are not used as the main criteria. An evaluation study of adult education projects in Jamaica showed that every community has a potential reservoir of human skills. "If such reservoirs are properly mobilized, trained and supported in adequately equipped learning centres, they could revolutionize non-formal education throughout the island" (Elliston 1974).

In Mali, villagers selected people who could volunteer for a short training course. Two "lettered" individuals were selected and assigned new roles. One was the elder (called war veteran) who had some knowledge of reading and a position of authority within the village. The other was the "opposite," a young person with minimum education (5 or 6 years) who was more up to date than the elder. The ideal arrangement, which was not always possible, was to have both of them in one village literacy centre to reinforce each other's knowledge (Dumont 1973).

Incentives were used to recruit the volunteers. Extra food rations, such as tea, oil, sugar, supplied through the World Health Organization, were distributed in a ceremony to the teachers and students. Similarly, the practice of offering incentives is growing in most countries to ensure teacher attendance and also to impart a sense of responsibility and value for the services rendered. The Pakistan experience has demonstrated the wisdom

of not treating volunteer teachers as inferior or second-rate and of involving them in planning and administering the literacy program. When treated as true participants, people often volunteer again. Even when they are no longer active in a program, volunteers who have been well treated and respected are usually strong allies, spreading the good word.

Encouraging secondary school and university students to volunteer for practical development work, such as literacy teaching, is becoming more seriously considered as a useful combination of work and study and as a means of maintaining the student's awareness of and contact with the country's development needs and its rural people. The work is also a valuable component of the curriculum: learning to be of service to others and learning "applied humanity." In fact, the founder of the U.K. Volunteer Service Overseas and of Community Service Volunteers, Alec Dickson (1976) has recommended that university students spend 1 year of their regular course work pursuing practical development service in their field of interest.

Training for Literacy Work

Decisions about training should be based on responsibilities that the literacy workers are expected to assume; this holds true for all workers,

A teacher trainee gives a mock lesson.

especially teachers, who are the frontline of literacy programs. Some advocate an initial training of 1 month for teachers so that they receive a solid groundwork for preparing and organizing the sequence of lessons and have ample practice in adult education teaching methods. Others propose an initial training of 1–2 weeks with provision for regular week-long follow-up sessions in centres set up in key areas of the project and placed under the responsibility of experienced teachers.

Training should be linked to job advancement and career aspirations, as was found by the République du Congo. The *agents de l'alphabétisation* who work for the Department of Literacy were required to follow a training program that included 1 month of retraining each year, attending operational seminars every 2 years, and undertaking study abroad. However, the training was not recognized in terms of job classifications for career advancement; consequently, the agents were discouraged and the turnover was high. It is proposed to change the job category system so that these cadres are on a par with professional colleagues and qualified teachers (République du Congo no date, p. 45).

Well-trained adult educators are difficult to find in the field of functional literacy according to the report of the International Symposium on Functional Literacy (1973), which went on to say that most universities and teachers' colleges have not addressed the problems of literacy work or the training requirements of the literacy worker. To help fill the vacuum, the International

. . .part of an experimental training program.

Institute for Adult Literacy Methods (IIALM) has produced a series of practical monographs as a set of self-instruction tools for the training of intermediate level literacy workers in developing nations.

The IIALM was established in 1968 by UNESCO and the Government of Iran to provide documentation, research, and training services on the methods, media, materials, and techniques for adult literacy. It has pioneered in literacy information exchange, and its work deserves more and further international support, particularly in the area of materials for the training of literacy workers and self-teaching materials. The training manuals use self-programing, self-instruction techniques, realizing that literacy work is often a lonely vocation where the only available source of guidance may be a book.

A major lesson is that schoolteachers must be trained in literacy work and in adult education as a component of their formal training. Also instructors in teachers' colleges must themselves be experienced in literacy teaching and in rural literacy programs. To date, no evaluation or comparative studies have been published on what literacy training has contributed to teacher performance in the formal classroom. Because so many developing countries are initiating universal primary education, research on the experience of teachers in literacy work could make an important contribution to teacher education and to pedagogy.

What has emerged in practice is an initial training period followed by in-service training and supervisory activities. The common denominator is that training is ongoing. Studies undertaken in several projects support, in general, the following recommendations for teacher training:

- A short and intensive initial training followed by periodic retraining sessions;
- Practice and use of actual teaching materials; and
- Strong introduction to theories and practices of adult education, such as concepts of adult psychology and of learner-centred teaching styles.

The preference for short initial training and periodic refresher sessions of at least $1-1^1/_2$ days arises both from the practicality of repeated reinforcement of basic skills and from the opportunity provided for instructors to use class experience as a practical source for their own learning (UNESCO/UNDP 1975). Frequent in-service sessions offer an opportunity to exchange ideas, information, and experiences.

Initial training has varied from 5 days to 2 months. The Pakistan experience (David 1972) is that a long timelapse between training and teaching affects teacher performance negatively; unless the methods used in short courses are immediately applied, they are forgotten. Therefore, teachers must begin teaching immediately after courses to maintain skills, apply principles of teaching adults, and to remember advice.

One of the problems with relatively untrained teachers, either paid or volunteer, has been their inability or hesitancy to keep and maintain the necessary records set up for evaluation of the program. The reason is simple: teachers have not been trained in record-keeping nor have they been adequately informed of its importance. Part of the training program and of in-service meetings should be to inform teachers of program objectives and data-gathering and to ensure they know how to keep records. Village/community organizations may be recruited to help the teacher with necessary record-keeping.

Supplements to in-service training, such as practical teaching manuals devised with the participation of both experienced and novice teachers and newsletters with helpful advice on specific teaching practices, give teachers support and a sense of collegiality.

The growing evidence of the effectiveness of short initial training followed by continuous in-service and supervisory activities challenges traditional training principles that assume the necessity of several years of formal preparation.

Short initial training combined with recurrent cycles of training is less expensive than extensive preservice training and focuses attention on new methods of pedagogy that increase interaction between teacher and learner. It does demand good supervisory services (and the administration to back them up) as well as clearly planned systems for in-service training and for opportunities for teachers to continue formal education and to obtain certificates.

Training is a continuing process. Just as literacy is regarded as one step along the path of continuing education, short-cycle training is to be regarded as one step along the path of developing a well-educated cadre of teachers.

Although much has been written about training for literacy teachers, little exists about the training needed by supervisory and administrative personnel. In contrast, there is much said about the lack of trained organizational and research staff. At present, organizers and administrators learn on the job from cooperating with other agencies and disciplines; they represent a store of information and should be approached by researchers to identify training needs of administrative personnel.

Training concerns not only instructional staff, but all people who have a role in literacy: organizers, promoters, planners, administrators, librarians, etc.

> . . .an important achievement of EWLP was to show that a wide variety of professional skills not usually allied with literacy must be, and could be, mobilized to enrich literacy work and post-literacy adult education. Specialists in various branches of development had to learn to express themselves in terms comprehensible to learners and new literates without speaking down to them. Scriptwriters, journalists, radio producers and designers and producers of graphics had to go through a similar metamorphosis (UNESCO/UNDP 1975, p. 133).

An obvious lesson of the EWLP, and other programs, is that administrators should see their relationship with one another as a team and themselves as trainees as well as trainers.

Role of Supervisors

The literature indicates that improvement of training programs, in-service training sessions, and the quality and frequency of supervisory help all directly affect teacher performance, student interest, and dropout rate. The need for a constructive and well-planned supervisory program, emphasized by Gray (1956), continues to dominate the experiences and evaluations of literacy programs.

Supervision, in general, has been an administrative headache. The reason, as Gray pointed out (1956), could be that the problems of recruiting and training teachers take so much time that organizers have had little or no energy for the follow-up required in supervision and improvement of teaching. Ethiopia is one country that has experienced problems of inadequate supervision. According to a report on the Ethiopian problem, supervision could have been improved by simple steps such as providing the supervisor with a horse, a mule, or bicycle or by reducing the area of operation. One problem stemmed from the practice of attaching literacy programs to the school system and placing them under the administration of already overburdened district education officers. When this practice was changed in Ethiopia (and in India) and full-time project officers were appointed, supervision improved.

Even in 1956, Gray noted that there was "nothing new" about the need for leadership in stimulating creative, cooperative effort among teachers for the improvement of teaching. His suggestions are still valid: supervisory programs should begin with the practical needs of the teachers as discovered through an intensive study of their successes and failures and should include conferences with them, practical demonstrations, encouragement so that they will tackle their own problems — such as how to prepare suitable classroom materials — suggestions of supplementary and library materials, and courses on how to prepare and use informal tests of ability. Gray stated:

> . . .The ultimate goal of such efforts is the creation of a staff keenly interested in teaching problems and working continuously and cooperatively with supervisors in efforts to solve them. It is important to remember that good supervision does not seek to regiment teachers; it seeks rather to stimulate creative effort on their part (1956, p. 267).

Summary

Ideas on how teachers should be recruited and trained vary considerably, but consensus is forming on two factors: teachers should be acceptable to the community (or employees in a work place) and to the learners, and they should be chosen for their capability — technical or occupational competence — to support the goals of the program. Although primary schoolteachers are regarded as the main recruitment source, evaluations indicate that nonprofessionals and community volunteers can be as effective as formal schoolteachers, when given training and supervision.

Shortages of workers trained in literacy teaching, supervision, and administration are cited in many reports; more attention to their systematic training is urged as well as involvement of universities and colleges in their training needs. The general practice is to provide teachers with initial training up to 1 month followed by in-service activities and supervision. Evidence is growing that short initial and continuous in-service training is very effective, challenging traditional, formal training.

Evaluation of the impact of retraining schoolteachers in literacy and the teaching of adults could make an important contribution to universal primary education.

Participants

The recruitment and training of teachers has been, and remains, such an essential part of literacy organization that similar attention has not been paid to the learners, their characteristics, and their needs. The emphasis upon teaching rather than learning has, however, shifted, heralded in many ways by *Learning To Be*, the report of the UNESCO Commission on the Development of Education (1972). Indicative of the change is the increasing use of the terms participant and learner rather than the more passive student and target audience. A change in terminology may be more verbal than actual, but it does reflect more conscious attempts to focus on the learner — not an easy person to profile — and the practice of participation.

The growing consensus is that stable attendance and successful learning are related to the degree to which goals, content, and methods are learner-oriented, related to specific needs, and involve the learners in program planning, management, and materials content (UNESCO/UNDP SIPA 2, 1975).

In a paper on literacy strategy for rural development, given at the International Symposium for Literacy (1975), Manzoor Ahmed identified a problem that runs through all literacy reports:

Uru Indians learn literacy skills.

> . . .It is not surprising that we often hear this frustrated complaint from program designers and operators: 'We have a literacy program keyed to the life situations and problems of the learners; we have lesson contents and methods especially designed for the group, and instructors especially trained; yet the people are not interested; there is lack of support and enthusiasm, a high dropout rate, and a low retention of literacy skills' (Ahmed 1975).

One reason for frustration is that the learners have not been included in program preparation and not enough attention has been given to actual conditions in which they live and what literacy can contribute to their lives. A UNESCO report on progress achieved in literacy has summed up the problem:

> . . .Clearly, literacy programmes must take into account the question of why people are likely to be attracted to them. A certain amount of research has been carried out on this matter in the context of programme design, but it seems likely that many literacy programmes are devised according to the notions of what illiterate adults *should* want rather than what they actually *do* want (UNESCO 1972, p. 39).

Preparation and Motivation

The major mass campaigns, such as in China, the Soviet Union, Cuba, and, more recently, the United Kingdom, have all concentrated on preliteracy preparation — the creation of a favourable climate (social, psychological, and political) in which the relevance of literacy is explained and interpreted. Preliteracy campaigns have been used in Tanzania, Botswana, and Somalia to communicate the objectives and benefits of literacy in relation to development goals and to orient people to action, dialogue, and participation. Effective use has been made of radio, folk media, festivals, traditional and popular music, and drama. When literacy programs are selective and experimental, the potential for generating such a climate may be limited (UNESCO/UNDP 1975, p. 153), but it is there nevertheless. In a sense it may be easier to capitalize upon because the groups or regions are more clearly defined.

Preliteracy preparation demands a knowledge of the participants. Erroneously, planners assume that people with no previous exposure to literacy or written language will instantly see it as a solution to their felt needs. There is much to be said for the opinion of fieldworkers in rural development that there may well be immediate needs — a safe water supply, waste disposal system, etc. — that can be tackled as a preliminary step to literacy training. Working on solutions to such problems is a means to implant a desire for literacy and to mobilize and coordinate village or regional action.

Motivated learners who perceive the value of literacy in their lives can overlook many barriers of methods and pedagogy (Ahmed 1975; Oxenham 1975). People who feel the need for literacy accept the general skills in whatever form they find them — functional, work-oriented, or basic literacy. This does not mean, as some literacy programs appear to have assumed, that a competent teacher and a supply of primers can motivate a class to learn. Studies of the earlier programs of the Pakistan Adult Basic Education

Society (Rainsberry 1974) have concluded that learners must have had some exposure to written language, seen the need for reading, or heard of other illiterates who have achieved success through literacy before they will apply themselves to the lengthy task of becoming literate. Premotivation hinges on a learner's understanding the goals and objectives *before* the classes start.

Evaluation of the Isfahan project in Iran (Bazany 1973) found a close association between a person's previous involvement in education — no matter how limited the exposure — and his or her interest in enrolling in a functional literacy course. This was particularly marked in the case of women: the probability that a literate woman was interested in participating in the program was twice that for an illiterate woman. What motivated the former? The acquisition of literacy and vocational training. Both men and women related the two goals closely, but literacy alone was somewhat more frequently mentioned than was vocational interest alone.

The learners' attitude toward writing also affects motivation, as has been shown in the case of Iran where writing has been preserved for certain castes and has remained a mystery to the masses. Furter pointed out the cultural difficulties of creating a positive literacy climate:

> . . .cultural characteristics explain why even today illiterates are not bothered about their illiteracy if an intermediary is available . . . . Hence, the reactions of the peasants in northern Iran who asked to be paid for learning to read and write. They were not conscious of illiteracy as being their problem; it was somebody else's. The wide range of literacy's cultural functions also prevent the illiterate from seeing that it has any close bearing on the exercise of a trade.
>
> . . .Traditional agricultural techniques may still be improved to a large extent without literacy training although this no longer seems to be true for modern techniques. The importance of literacy is undisputed in urban areas where the density of population and the complexity of human relations make human exchanges, and consequently communication by word of mouth, somewhat uncertain. It is here that writing becomes a necessary medium. As the differences between the urban and rural worlds recede, illiteracy will come to be recognized as a problem (Furter 1973, p. 9).

Motivation is influenced by group support such as from peers, community leaders, and, in the case of women, often mothers-in-law. Generally a program is more likely to be acceptable — and thus successful — when its planning involves village committees or indigenous social groups. The new learner needs support and encouragement, which can come from a sense of solidarity with others. A report on the Burma Adult Education Campaign (Burma 1976) stated that the first stumbling block encountered by local literacy committees was that adults believe they are too old to learn. Such psychological barriers are not generally given close attention in reports of literacy programs. The fact that a great number of people do enroll in literacy classes appears to overshadow the need for a clear understanding of the fears and apprehensions that cloud both motivation to enroll and to continue.

A major field-tested research project during 1976 studied indigenous nonformal adult learning in relation to health adoptive practices in two rural communities in Ghana and Sri Lanka and has added new data to the understanding of attitudes and motivation (Amaratunga 1977).

The findings indicated that literacy and educational levels of the villagers did not correlate with their adoption of new practices. Illiterates were as potentially able to participate in nonformal education projects as individuals with higher educational and literacy standards.

Fatalism emerged as the most influential personal characteristic hindering the adoption of new practices by rural adults. Because fatalism and a sense of powerlessness to control one's own life are believed to be universal in oppressed groups, such as peasants and women, adult education should be directed toward identifying new means to counteract the inhibiting influence of fatalism.

The data from the health practices study indicated that the extent to which a villager referred to influential people within the village did not affect participation in the health education program. In other words, local influential people or apparent "opinion leaders" were not instrumental in influencing attitudes of the villagers. The study confirmed the need to identify indigenous knowledge systems, particularly the information and skill transfer methods that operate informally.

The reasons that people wish to become literate are many, and little is known about events or characteristics that signal or produce readiness to enter and carry on literacy courses. New parents are potential learners in terms of child care, health, nutrition, and expectations of education for their children. The community may be ready for a new water system, the construction of which can prompt literacy classes. The report of a workshop for voluntary literacy organizations in India (Shrivastava 1976) concludes that the best results are in areas where modernization is under way, the society is in a transitional phase, or the government has planned development programs. For instance, when Gezira, Sudan (Sammak 1973), was designated as a development zone, a work-oriented literacy project was a natural to provide the new settlements with much-needed trained personnel.

Geographic mobility from rural to urban life also creates literacy needs. Political and civic reform, such as Peru's educational reform act (Buttedahl 1976), can be a motivating force. Moral incentives, such as those set out in Islam and Arab culture may also motivate literacy and are possible sources for program content (ASFEC 1975).

In a quantitative study in one centre in Saudi Arabia (Hamidi 1975), religion proved to be one of the most significant motivating factors among illiterates. Teachers and administrators were in accord with other factors identified by learners but failed to assign as important a role to religion. The study found the following to be key motivators in adult basic education and for recruitment programs:

- Education for self-improvement (personal);
- Privacy (write and read own correspondence);
- Religion;
- Safety and daily needs;
- Social status and prestige; and
- Vocation and finances.

National support affects program acceptance at the community level, especially when the program is administered by a nongovernmental organization. In fact, in the Punjab, local officials hesitated to back a program that

had not been pushed by national government officials for fear of making a wrong decision or losing their appointed jobs. When the Government of Pakistan requested that the director of the program of the Adult Basic Education Society (an independent organization registered within the Social Welfare Department of the Punjab) become a leader for national literacy programs for the People's Works Program, people at all levels immediately supported the program and many requests for ABES programs came in from villages.

Along with Guinea, and to some extent Algeria, the United Republic of Tanzania has encouraged some degree of learner participation in managing, if not planning, literacy projects. Committees were elected from the program areas when literacy classes were formed (UNESCO/UNDP 1976, p. 146). Class committees decided discipline measures, spending of money from demonstration plots, and class schedules. Similarly, in the Punjab, class attendance improved when participants were responsible for deciding details such as the location of the class, time for meetings, etc.

In Mali (Dumont 1973), literacy personnel met with village authorities and agreed certain requirements before a literacy centre was set up. The village then formed a literacy committee of, as a rule, the village chief, two advisers, a representative of the women and of the youth, the agricultural agent, and the medical orderly. The committee was responsible for finding literate villagers to act as organizers, to be trained to conduct the classes, and to recruit at least 40 men and women for the class.

Selection of Participants

The type of approach (selective, mass, or a combination) is a political and economic decision. There is little specific and comparative research on the actual achievements and retention factors deriving from the decision, for instance, to provide selective programs needing either a fairly complex organization or coordination among many literacy organizations, governmental and nongovernmental, or to conduct selective programs in which literacy curricula are based on common traits or occupations and which require a less complex organization.

Functional and/or work-oriented literacy programs are by their nature selective. Most of the large-scale programs, such as those of EWLP, have focused primarily on the agricultural sector (86% and, within that, on certain "crop" occupations), although 9% are devoted to the social sector including services, domestic activities, health education, and activities relating to women, 3.6% to the industrial sector, and 1.4% to the arts and crafts sector (UNESCO/UNDP SIPA 2, 1975, p. 31).

In Brazil, the decision was to start with urban dwellers where large numbers of people could be reached easily. Israel decided to start in places where illiteracy was dominant rather than in cities where the percentage of illiterates was not high. A survey of the country found 42 centres where illiteracy was more than 70% and, thus, efforts were concentrated there (Navon 1966).

The selection of target groups within regions sometimes proves unsuccessful because other groups feel left out and hostile to the program. This was the case in the Punjab in early pilot projects of the Adult Basic Education Society. The exclusion of some groups created social problems that were

subtle but serious enough to create dissension in the villages and in the literacy classes. The project personnel became aware of subtle pressures placed upon the adults attending the classes, which were reflected in a high dropout rate. Again, when planning a pilot project centred on young people aged 10-14, the ABES met opposition. Village leaders insisted that adults be included in the classes, even though they knew the classes were to test the materials for use by young people. They could see no reason to exclude some while giving preference to others (Rainsberry 1974).

Class Size and Dropout

How the learner reacts to the size of the class and the reasons for dropout are not entirely clear in any evaluations. The usual class comprises 35–40 persons, the size probably determined by the constraints of availability of instructors. Studies indicate the instructor-to-learner ratio makes little difference unless the figure is well below 1:15 (the Cuban campaign tried to maintain a 1:7 ratio for this reason UNESCO/UNDP 1975).

Evaluation reports rarely correlate achievement with class size, perhaps, because many learners drop out (50% on average) and the classes become too small. In fact, it may be that the large initial enrollment is predicated on high dropout rates. Whereas class size is a burning issue in school systems in most developed countries, the value of a low teacher-learner ratio has not been decided. Most reliable evidence shows that the size must be under 15 to net positive effects on the quality of teaching.

The Pakistan Adult Basic Education Society tries to maintain a standard of 10 students per class, averaging 16.5% dropouts compared with 23.5% for classes enrolling 11–15 adults, and 35.8% for classes with 16–22 adults (Rainsberry 1974). This class size permits close supervision, the introduction of which has decreased dropout rate substantially. Supervision seems directly related to improved performance by the teacher, which, in turn, positively affects student performance.

On average, a dropout rate of close to 50% or higher was experienced by most literacy programs. How many consistent attenders actually completed the classes is difficult to estimate because the figures vary so widely. Seasonal harvest and weather extremes were the most obvious reasons for periodic low attendance. Married learners proved less likely to drop out, but their family responsibilities hindered their attendance (UNESCO/UNDP 1976). Programs slow in getting under way due to poor distribution of primers and teaching materials and long, drawn out programs, such as in Ethiopia, had inconsistent attendance.

Dropout rate has, perhaps, been overvalued as a criterion for evaluating literacy programs. Adults are free to leave whenever a program does not fulfill their needs or begins to interfere with what they judge to be more important matters.

The EWLP critical assessment stated that either the EWLP literacy program was not perceived as relevant or it was not relevant enough to compete with other priorities. It went on to say:

> ...In any event, experience of EWLP does not appear to offer a clear set of practical measures which literacy organizers can take to ensure more satisfactory rates of learner participation. Perhaps indeed, it

> is less a question of taking practical measures than of creating a favourable psychological (and hence political) climate. Further, it may be thought that the selective and experimental dimension of the programme perhaps limited its potential for generating such a climate.

Most evaluations and descriptions of literacy programs portray participants only through quantitative tables, statistics, and ratios; rarely does the information assess learners' feelings and experiences in their daily lives when they learn to read and write. One of the few learner-centred investigations was undertaken in Tanzania in 1977 (Kassam 1977).

> ...To assess the literacy achievement of people as a merely 'technical' issue, based predominately on quantitative and statistical methods, carried the underlying assumption that complex qualities of human experiences can be adequately measured in statistics stretched and meaningfully compared in numerical tables (Kassam 1977, p. 11).

Neoliterates were interviewed, and their responses showed that literacy had made a powerful and positive impact on the quality of life of the majority if not all of the people. They had become literate through various functional literacy primers not through psychosocial methods associated with Paulo Freire.

> ...They have got rid of their former state of marginality, alienation and fear, they feel more self-confident and have become assertive, they have acquired a new self awareness, they have become politically conscious, they have regained their complete human dignity, they cannot be exploited and humiliated in the same way as before, they have become self-reliant in many ways, they now feel like active subjects rather than manipulable objects, and they have begun to demystify social reality (Kassam 1977, p. 17).

A statistical profile of the average literacy learner was provided in the EWLP report: the age target for most programs was 15–35 year olds, the most economically productive of the population.

The estimate that women constituted 55% of all EWLP enrollees is said to be due to their importance in agriculture, but this figure needs considerably more explanation and documentation. The majority of illiterates are women, women who work long hours and who lack, in many cases, a supportive climate for their learning. Any profile of participants clearly needs to concentrate on the problems and conditions of illiterate women.

> ...We have the feeling that any nation will pay more attention to the landless, the urban poor, the peasant, who are likely to produce instability of basically dissatisfied, than to women, who are raised to submit rather than complain (UNESCO/UNDP 1976, p. 163).

The rhetoric on the eradication of the "scourge" illiteracy and the intensification of efforts in the past decade have been impressive. Much less impressive is the minimal attention to the social, economic, and legal advancement of women. Much of the documentation on the neglect of half the world's population results from the momentum of International Women's

Year 1975. Much of that documentation is still not easily accessible nor brought together in manageable form and subjected to analyses.

The country reports of the EWLP gave little information on the role of women in functional literacy programs (as instructors or as participants); on the degree to which women were actively recruited as participants; or on whether or not programs were developed for the work-oriented needs of women, such as, for many African countries, in the areas of marketing and distribution. Although women made up more than half the participants in programs in the agricultural sector, this "equity was not deliberately sought," stated the EWLP critical assessment, going on to say:

> . . .Since vocational programmes were open to women, and since women play a very important agricultural role in many EWLP countries, the fact that females accounted for some 55 percent of all programme enrolees may further enhance the economically functional profile of learners although in many cases they had no other choice of courses. The figure on female participation however, seems to bespeak strong equity compared to other forms of education in EWLP countries (e.g. schooling) which generally features much higher enrolments of males than females. Such equity was not deliberately sought by EWLP (UNESCO/UNDP 1976, p. 62)

The 55% for female participation is very small compared with the number of illiterate women and the number of women who, in many countries, perform most of the agricultural work.

Other descriptions of literacy work with women agree on three common problem factors:

- Lack of a positive climate for the advancement of women in the society generally and in the community in particular; the force of tradition militates against education for women;
- Lack of educated women for teachers and women trained to provide leadership in organization, administration, fieldwork, and adult education, particularly in rural areas; and
- Lack of learning materials based on women's problems and interests.

Without a simultaneous attack on these three problems, the education of women will continue to be impeded. The factors are analogous to those identified in family planning work in India:

- A good propaganda program to create the climate;
- The neutralizing of male opposition so that men are not an inhibiting factor; and
- The employment of women practitioners.

According to former director of the Indian Adult Education Directorate S. Doraiswami, the Indian Farmers' Functional Literacy experiment outlined necessary strategies for action for educational advancement and socioeconomic participation of women (Doraiswami 1975). The acquisition of formal education does not equip women to participate socioeconomically in national development; therefore, women's education at all levels needs to be more vigorously oriented to economic and social issues. Society also needs to be educated to expect socioeconomic contributions from women on equal terms.

At present, most education programs for women focus on crocheting, knitting, etc. rather than employable skills.

Working exclusively with women's groups can be self-defeating. Any strategy for promoting women's education must necessarily include a simultaneous and powerful program to educate society, particularly men, on the need for women's education and on the role of women in society.

However, in many instances, separate and well-defined programs for women are needed to improve women's economic position and raise their occupational skills.

Studies have shown that the number of women participating in educational programs is in direct proportion to educated women workers in a locale. This finding underlines the importance of constant reorientation and upgrading of rural women workers, who are mostly at a low level of educational and professional competence but who serve as role models and are emulated by other women learners.

Any massive effort for women's education must be based on employment opportunities and employable skills. At present, the content is based on skills in housekeeping, child care, tailoring, embroidery, and some civic information. Although such skills may provide a starting point, they are not sufficient to lead to confidence in solving general problems and in participating in economic and social changes.

Integrated Programs for Women

Programs that include literacy, functional (nonformal) education, and leadership training for rural women emerge as a priority for many countries. Integrated programs — for example, literacy combined with health and child care — require longer training than do single focus programs, as was shown forcefully by a project in the Andhra Pradesh district of India during 1972. The object of the project was to determine the most efficient delivery systems to convey a "package" of information and skills related to mother and child health care. Nonformal Education for Rural Women: An Experimental Project for the Development of the Young Child was sponsored by UNICEF with the concurrence of the Government of India and undertaken by the Council for Social Development. A summary of the design and result is instructive. There were four experimental groups. The first received a training program to develop functional literacy skills — reading, writing, and mathematics — with content derived from health, nutrition, child rearing, and family planning. Training was provided by a teacher 1–2 hours a day six evenings a week in a classroom setting; the second group had prenatal and postnatal medical care, daily food supplements, and practical demonstrations about health, nutrition, and family planning; the third group received a combination of functional literacy classes and mother-child care demonstrations, instructions, and services; and the last group were controls who received only the already existing health and family planning services and programs of the government.

The researchers expected that the combined literacy and mother and child care education and services (group 3) would produce the greatest acquisition of knowledge and adoption of new practices. However, this was not the case. The results were that group 2 showed the greatest progress in the acquisition of knowledge and practices regarding mother and child care; group 1 alone reached a stage of literacy sufficient to maintain the skills; and group 3 did not gain as much mother and child care as did group 2 nor as much literacy as did group 1.

Training Rural Women

Prodipto Roy, one of the directors of the Indian mother and child care project, has identified a critical problem in the education of women: the lack of trained women to give leadership in rural areas:

> . . .One of the biggest sociological problems which impedes progress of all development programs directed towards rural women is the difficulty in finding educated women who are willing to work and can work effectively in a village environment. The social incompatibility is on both sides. Girls who have graduated from high school with two years of nurse's training have psychologically left the village. From the village point of view, there is not a social position for a young — and typically unmarried — educated girl living alone . . . (Roy 1975, p. 5).

To solve the problem, the Indian government instituted a policy to recruit married village women and train them and send them back to the village. It

offered a 2-year course comprising academic content, home and leadership skills to married women with grade 6 education, providing the equivalent of grade 10 schooling. The courses were run in rural centres, the graduates often serving as good sources of leadership for women's education.

A different attempt to bridge the gap in women's leadership was undertaken by the Union Comunal Salvadorena in El Salvador, a *campesino* cooperative organization. The program for women members included health, family planning, child care, literacy, and techniques for setting up cooperatives and group organizations (Clason 1975). It employed local, untrained women who, with basic training, began planning and coordinating their own program and training others to do the same. The program drew on the experiences of the Ecuador project administered by a team of Ecuadorians under the Ministry of Education with help from the Center for International Education, University of Massachusetts. In the Ecuador project (Clason 1975), women leaders had become facilitators for the learning process as well as for community development projects involving the development of cooperatives for the women in the communities.

Another approach was taken by the Union of Women of Tanzania (UWT), an affiliate of the country's political party. The UWT established its own institution for the training of rural women, Rungemba Leaders Training Centre, in which women trained for 3 months and returned to their villages to train others, organize women's groups, and share their knowledge. Most participants have had primary education. The courses are sponsored financially by the government and by UNICEF, and some 120 women are trained annually. At present, some other centres train rural women leaders, and by 1980 it is expected that each district will have its own centre. The UWT is the only national organization instituted to cater to rural women's social and economic promotion (Kokuhirwa 1975).

Before the recent change in government, Iran had mobilized to educate young women for voluntary service in health, literacy, and extension services in rural areas. Political will and national leadership for women's education was evident in the decisive role of Princess Ashraf Pahlavi, sister of the deposed Shah, who served as vice-president of the national committee for the world literacy program. One experimental project in Saveh, 70 miles from Tehran, has prepared and tested functional educational programs for rural women and recruited and trained village women as instructors.

The major findings of previous Iranian research and of the 1st year of the program have implications for other women's programs (Homayounpour 1975, p. 28):

- To be successful, functional literacy programs must be based on a deep understanding of the environment and daily life of rural women.
- The education of women can be fully successful only if it is planned along with a program for the entire community, in particular, one for village men.
- Increased knowledge and, more particularly, skill acquisition directly affect the social participation of women and their economic contribution to their families.
- Programs for rural Iranian communities must include religious content.
- Discussions are useful for initiating interaction and participation among learners.

- Trained community members are feasible and successful replacements for professional teachers.
- Functional literacy is the beginning of self-sustaining education fostered early in a program through the provision of supplementary reading materials.
- More efficient organizational mechanisms are needed to mobilize resources and implement coordination.
- Literacy programs should cover at least 70–80% of the active age population and should include intensive activities.

Reports on the significant women-and-literacy projects in developing countries have not yet been collated, and, thus, the experiences in training rural women for leadership roles have not been widely disseminated.

Summary

No set of principles ensures that people will enroll in literacy classes, attend them consistently, and continue using the skills throughout life; however there has been evidence that a favourable psychological climate is essential. Also, consistent attendance and successful learning seem to relate to whether goals, content, and methods are oriented to learner needs and participation.

Often, adults seek practical information and skills to improve their economic lot and social conditions as well as literacy skills, but a person who wants to become literate is likely to enroll whether the program is functional, work-oriented, or basic literacy.

How to enkindle and maintain such a desire has eluded planners so far; however, the answer seems to lie in earlier positive literacy experiences, significant personal and community events (becoming a parent, community action for clean water, modernization projects), and peer group and community support. One thing is certain: preliteracy motivation is more than general publicity campaigns and is linked closely with the selection of target participants.

Studies into the effect of class size on learner motivation have not been conclusive, but experience of some countries indicates that the ratio of teachers-to-learners makes little difference until the figure drops well below 1:15.

Even dropout rate is not necessarily a reflection of motivation. Adults may drop out of a particular class for personal or job reasons but may not wish to drop out of literacy learning. This suggests the need for recurrent programs to which apparent dropouts can return.

One means of motivating people is successful role models, a commodity in short supply, especially for women, in many rural areas. Consensus is that programs for women should be extensive — aiming at 80% of the active age population — and directed to their economic needs for employable skills. Crucial to the need for a positive national and community support for the education of women are programs to train rural women for leadership roles in their communities as teachers and organizers and for materials of direct relevance to women.

Curriculum, Content, and Methods

Literacy planners now acknowledge that, when chosen carefully, curriculum, content, and methods can help motivate learners. Previously, literacy teaching was more concerned with basic literacy skills than with the relevance of the message, although initial primers do reflect values and attitudes of their writers. In countries where literacy campaigns have been part of a social and cultural revolution, the content incorporates ideology, and literacy programs are carriers of new ideas to educate, mobilize, and train the population for national goals.

In the past decade, particularly in the Experimental World Literacy Programme, vocational and technical training increasingly has been integrated with literacy training, and considerable effort has been devoted to striking a balance between vocational skills and literacy skills in the curriculum content. A UNESCO document of 1972 stated that the task was difficult for the EWLP.

The critical assessment of the EWLP stated:

> . . .Efforts were intended to bring about two kinds of integration in particular: between the three R's on the one hand, and additional vocational subject matter on the other; and especially between theoretical and practical aspects of subject matter. The systematic extension of literacy curricula to include, in addition to the three R's, other vocational subject matter was a major innovation of EWLP. In this regard, the balance between the two subject areas varied widely from project to project (UNESCO/UNDP 1976, p. 160).

The report on Preparation of Problem Oriented Learning Materials (India, Government of 1974) for the farmers' functional literacy program in India acknowledged the difficulty of matching functional purposes with educational purposes. The essence of the problem, according to the report, is to ensure that the broad educational component is as relevant and concrete as the practical or skill component. The report described curriculum not as a compendium of general topics but as "an itinerary for a journey" toward the solution of practical problems and achievements of definite targets.

The journey is not always as straightforward as the theoretical itinerary suggests. For example, evaluations in Iran, Tanzania, and Ethiopia have indicated that in many cases participants respond better to, and learn faster, the vocational and practical component of a course. The vocational or agricultural element is familiar and frequently can be demonstrated, whereas literacy is a new task and one whose application may not be readily grasped.

The evaluation of the Iranian work-oriented adult literacy experiment (1973) stated that there were advantages in launching intensive literacy training before introducing vocational components, and other programs have

agreed, finding that neoliterates profit more from vocational training than do their counterparts who are struggling to acquire literacy and vocational skills simultaneously. In Kenya, evaluators felt that the triple goal of teaching farming, household management, and literacy (plus standard Swahili) was too much; however, they did not know whether the fault lay in the timetable or in the curriculum.

Teaching functional literacy in an integrated curriculum takes at least 2 years, especially when technical information is to be learned, but recent evaluations indicate that the integrated package is worth the time and effort. It is a useful and permanent way of combining specific information and/or training with literacy.

The integrated curriculum is most successful if presented in well-defined sequences or modules, somewhat like programed instruction because, as was shown in a Pakistan study (Hussain 1975), adults tend to persevere in step-by-step studies. Completing a step promotes a sense of achievement that motivates them for the next step. In Mali, the 2-year functional literacy program used curriculum sequences based on a rigorous examination of the different stages in farming (Dumont 1973), and in Iran the modular curriculum related to the life of the participants.

In an integrated curriculum, whether basic literacy is studied alone initially or with other subjects, the main problem is to define the course content and gather suitable teaching materials. All literacy learning depends upon subject matter and on printed materials.

The initial evaluation of EWLP concluded: "the integration of the educational content increases the effectiveness of functional literacy work" (UNESCO/UNDP SIPA 2, 1975, p. 46). The document also stated that studies undertaken for global evaluation confirm the following:

- The more the content centres on problems that workers actually encounter in their productive activities, the more effective is training and
- The more the content and materials take into account the cultural environment of the workers the more effective is the training.

The focus is on the learner and on questions, such as: What are the criteria for integration? Who decides what is relevant? Should curricula be more diversified, and hence more specific, so that they meet the needs of particular audiences?

Some literacy fieldworkers in India are of the opinion that health is a better motivator and integrative force than is agriculture. Health needs do not differ as much as agricultural needs, and a curriculum built around health is functionally relevant to both men and women.

In reviewing approaches to the teaching of literacy in Iran, Tanzania, and Turkey, Oxenham stated that "literacy or for that matter, any instruction, which starts from the learner, is more likely to help the learner in the learner's own terms and is more likely to succeed." He added: "As the Turkish experience suggests, if the instruction can also be conveyed in the learner's idioms and styles, it has a better chance of engaging the learner permanently" (Oxenham 1975, p. 4).

The relevance of work-oriented literacy to participants has been underlined in studies of ALFIN in Peru:

> . . .It is difficult if not impossible to train successfully for work when

> the population concerned is not yet integrated into the production process, since the training adds up to no more than learning a series of manual gestures and attitudes without any real meaning for application (Lizarzaburu 1976, p. 137).

When curriculum and instruction are centred on the learner, the implication is, as Oxenham (1975) and others have stated, that large general programs and standard curricula are inappropriate. One alternative is small, local programs catering to specific clientele. Within small groups having common traits, needs, or functions, it is possible to provide general programs of wide relevance. In Turkey, for instance, where cultural differences are many despite a common language, a study indicated that literacy curricula derived from occupations, such as cotton production, were acceptable and successful in quite diverse communities. In Iran's experiment, too, the value of specific programs for the occupational sector was evident (Furter 1973).

By identifying sociofunctional groups, such as in occupations, literacy personnel can devise training based on the groups' common needs. In Iran, for example, groups with a common alliance, such as the National Women's Organization and the Department of Agricultural Extension, were the focus of some literacy programs, which were general but valuable as training grounds in methods for instructors and curriculum planners.

Identifying common training or learning needs, or homogeneity, has been amplified in a synthesis of the EWLP evaluation:

> . . .the results obtained from functional literacy training vary with the degree of homogeneity of the groups of participants according to age, sex, previous literacy acquisition, socio-economic status, occupation, types of interests, and attitudes (UNESCO/UNDP SIPA 2, 1975, p. 17).

In homogeneous classes with similar levels of aptitude and motivation, teachers perform better than they do in classes with wide variations. The latter situation introduces stress as the teachers are forced to improvise and, if possible, to divide the class into groups (Lizarzaburu 1976).

The Iranian experience has demonstrated that participants learn better and faster when they share practical or intellectual interests.

Curriculum Team

Devising curricula that are relevant to the learners is a complex task needing input from linguists, people with experience in working with adults and in adult psychology, literacy teachers and administrators, specialists in vocational training, writers, editors, artists, and people experienced in production of print and nonprint materials. They constitute the central team in curriculum planning; they are responsible for producing the materials for literacy courses, drawing on local expertise.

A common assertion in the literature is that too many planning decisions are made by the central group and that greater decentralization of curriculum planning is essential as is consultation with teachers and learners.

Approaches

Particularly since the 1970s, many countries (e.g., Thailand, Turkey, India, Ecuador, Guinea-Bissau) have adopted a "life-oriented" or psycho-

social approach to curriculum design, which is more broadly based than a work-oriented focus. The attempt is to design curriculum content and methods around the adult learning process and the situation and needs of the learner. In many instances, literacy work links improvements in economic life and productivity with social change. The approach is seen as stimulating an active response: participants analyze problems, propose possible solutions, and decide action. Curriculum design includes elements of modular sequencing, basic learning modules, problem-solving, and indigenous culture.

Modular sequencing: The Iranian projects in Isfahan and Dezful experimented with a pedagogy based on the learning process and on a deeper understanding of the interests of the participants (Movafaghian 1974; Bazany 1973). The procedure was to identify and study problems — technical, social, and scientific — that adults faced in their occupations. Research groups of technical experts, professional and workshop supervisors, specialists in social affairs, employed and unemployed adults, linguists, and curriculum experts participated, identifying the content-to-be-learned so that curriculum development experts could prepare explanatory materials and a timetable.

The teaching materials were sequential, moving from problem-finding to problem-solving and were organized as modules — self-sufficient sequences — that fit in with the weekly class time. The weekly sequence included language training, technical content, mathematics, and social studies. (The coordination and integration of subject matter without an overload of information is an area of continuing research.) The method used in teaching arithmetic was one of the most successful applications of the learner-centred, modular process. The results were that:

- Compared with traditional and child-centred methods, the Iranian approach produced much faster and more efficient learning;
- The modules, each of which constituted a defined amount of work, fit well into a timetable and regular testing;
- Attendance and motivation were comparatively high because the content and methods were learner-centred;
- The new literates retained the skills because vocabulary was related directly to their daily life, and they used the terms in work instructions and vocational documents;
- The modular method, a tightly controlled and sequenced instruction, worked well for teachers of low qualifications, even facilitating their grasp of technical training;
- The use of clearly prescribed work to be covered reduced the variation in results obtained by different teachers; and
- A central staff of experts and experienced organizational designers was needed to develop curriculum and methods, to coordinate operations after local surveys had been made, to organize preservice and in-service teacher training, and to undertake evaluations.

Because the modular method used in Iran combined problem-finding and problem-solving and started with tangible facts and situations, it could be used in elementary education, vocational training, teaching of experimental

sciences, and out-of-school education. It is particularly applicable to adults because they have wide interests that are easy to classify but may be applicable to older children as well.

Basic learning modules: Bonanni (1973) stated that designing basic education curricula according to environments and specific daily life themes — nutrition, population, agriculture — is too costly, especially when the learners are to participate. He suggested a two-stage alternative: identifying skills that would help the learners to overcome their problems and then building learning units around the skills. The units, according to Bonanni, can be adapted locally to the learners' interests and particular needs.

Although the skills needed are determined by ecologic and sociocultural factors, Bonanni hypothesized that a curriculum based on skills could be used for populations in different geographic settings as long as they had similar agroecologic and sociocultural patterns. A typography of zones with common problems, common development vocations, and common expectations would be the basis of learning elements and curriculum materials to be used as core content.

Bonanni's idea — to date untested — may lead the way to a listing of common coping-for-action skills (similar to the employable skills identified by the International Labour Office) for use as the core for regional and intercountry curricula.

Problem-solving: The Indian Farmers' Functional Literacy Programme that started in 1972 as an experimental project in Jaipur district illustrates the emerging emphasis on problem-solving curricula.

At first, the project personnel focused on linking literacy with agricultural practice, selecting vocabulary, supplying information on high-yielding varieties of crops, and incorporating information on how to cultivate. Then, an evaluation was undertaken and made clear that more interdisciplinary and fewer structured materials were needed and that they should be based not on giving information but on solving problems. A change in curricula meant new design, new teaching-learning methods and materials as well as a revised role for literacy workers. An experimental project was established to identify problems, translate them into educational content, construct a syllabus, develop methods and materials, and train teachers.

The efforts of the project personnel in India resulted in instructional units to solve common technical, social, and agricultural problems, such as eliminating the inefficiency of cooperative societies and storing and packing produce. Focus of the project was shifted to small landholders and illiterate farmers because middle-sized and large landholders were better able to implement high-yield cultivation.

The teachers' guide for the Indian experimental project stated:

> ...The experiences in elaborating these types of adult education programmes were rather meagre and limited, not only in India but elsewhere, too. It was necessary both to break through conservative inertia in adopting this innovation conceptually, and equally to get a design for the elaboration and preparation of the new curriculum and materials (India, Government of 1974b, p. 11).

The document listed "obstacles to change" that, in effect, represent the problems faced by literacy planners:

- Conservatism of teachers;
- Inertia; functional literacy seen as instruction, rather than as education, training, involvement in community life;
- Traditional opposition between intellectual and manual work;
- Lack of experience in interdisciplinary teaching;
- Overwhelming influence of scholastic attitudes about education and of child-centred ideas;
- Teacher preference for subject-based timetables; and
- Insecurity among educators in tackling problems and questioning themselves.

Indigenous culture: The adult functional literacy and family planning project in Thailand, which was initiated in 1971 with assistance from World Education (Vorapipatana 1975), was predicated on indigenous culture, guided by Buddhist concepts. The program defined its objectives in terms of developing a *khit-pen* person — one who has acquired literacy skills; is able to identify significant problems; can cope with immediate problems of agriculture, health, economics, and civic responsibility; and can exercise judgment. The curriculum was designed to help learners logically approach problem-solving, objectively assess their own attitudes, and act on their decisions.

Methods and Curriculum

Instructional methods that centre on and grow from the learner are the most effective means by which to achieve literacy; however, the EWLP report stated that the vocational component of functional literacy programs has incorporated adult-centred methods more often than has the literacy component — possibly because practical, demonstrable ideas in farming or in production techniques are more closely related to the experiences of the learners and, perhaps, the instructors. Linking education with life is not new; it was Lenin's tenet for the Soviet Union's drive on illiteracy in 1919. W.S. Gray's book, *The Teaching of Reading and Writing*, first published in 1956, hailed the learner-centred method as a "recent trend."

In the past decade through practice and evaluation, the validity of the learner and the need for adult-oriented teaching methods have been rediscovered. One important contributing factor has been a growing familiarity with ideas, techniques, and research relating to adult learning and the philosophy and methods of Paulo Freire.

The best teaching method is to maintain a balance between firm guidance about the objectives of the program and flexibility to include direction from the participants. The modes of participation depend on the objectives of the program — for example, whether it aims to improve production (an operational objective); to change economic and social structures; and/or to bring about the kind of growth and confidence that results in individual or group action initiatives. An evaluation document of the EWLP stated that functional education leads to positive change when linked to political, social, or technical concerns of participants and that the findings in various literacy projects supported an open method of functional education — i.e., one that is capable of being modified and transformed through the

initiative of the participants and of those responsible for the literacy programs.

In other words, flexibility is important; the traditional, formal approach, with its emphasis on teaching rather than learning, has given way to new examinations of *how* learning takes place. The new emphasis, ideally, could transform the education system, including planning for universal primary education and for nonformal education. In many cases, literacy programs have given educationists the first chance to work closely with adults; the lessons learned, both in curriculum development and instructional methods, need to be rigorously assessed for their contribution to educational theory.

The critical assessment of EWLP identified three approaches or elements of pedagogy that are widespread and effective and that apply to both adults and children. Freire's approach should be added as a fourth so that the list would comprise the inductive approach, which recognizes and uses the learner's knowledge, experiences, and insights as starting points; the learning-by-doing approach, which relates practical demonstrations with concepts to be learned; the group approach, which espouses use of a variety of methods, techniques, and media with group appeal; and the education-as-cultural-action approach, which encourages people to liberate themselves from social and economic oppression.

Inductive method: The inductive method starts with group discussion to identify concerns or problems and the steps necessary for their solution. The curriculum and teaching materials are modeled around the problems, as was done in the Indian Farmers' Functional Literacy Programme. The method is similar to experience charts designed for preliteracy activities and used, for example, in Puerto Rico in 1953 (Gray 1956, p. 161). Through the combined efforts of teachers and students, the class focused on some vital or urgent problem affecting the community — such as the need for pure water — and developed both the ideas and sentences that communicated the problem and its solution.

In Turkey, a project under the General Directorate of Adult Education used problem-solving as a central strategy to uncover attitudes, values, and ways of feeling and acting (Srinivasan 1975). The teachers presented open-ended vignettes or dramatizations in which the characters were similar to the villagers and were illustrated by line drawings. Reflecting a strong oral tradition in Turkey, the teachers read aloud each day. Each episode was designed to create tension or to draw out divergent views. The result, according to a Turkish curriculum specialist, was like "holding up a mirror to the people where they can see themselves and decide if they want to change." In Botswana, folk media such as drama, puppetry, and song have been the means to uncover and discuss issues (Kidd and Byram 1977). These examples illustrate how it is possible to find an appropriate teaching-learning style in the abilities and experiences of the learners.

Methods for teaching basic arithmetic are not well-documented in literacy research. Countries such as Mali and Iran, however, have designed approaches that lead to fast and good mastery of mathematical concepts. They focus on the learner and capitalize on what the illiterate already knows.

The Mali experience (Dumont 1973, p. 44) deals with identification of problems. Initially the arithmetic programs were a series of lessons on counting, subtraction, etc., based on the reasoning powers of children. They evolved into "genuine, practical arithmetic" when the lessons turned toward

occupational problems and means of solving them. The decisive stage in the evolution was reached after a careful study of the tasks that illiterates performed and the knowledge they needed to perform them. An arithmetic (and reading and writing) program was then drawn up according to the workers' requirements.

The Iranian method (Movafaghian 1974) was similar in that it sprang from tangible facts and problems — technical, professional, or social — and progressed to abstract concepts. The method was particularly successful in the teaching of mathematics related to technical needs. It comprised several modules each of which began with a problem or task in the learners' occupation, illustrated, for example, on the blackboard. The instructors, thus, capitalized on the workers' capacity for mental calculation and showed them how to derive the rule or formula through inductive reasoning and how to apply it to real examples that called for mental and written calculation.

In brief, the inductive approach moves from the known to the unknown and takes the content and methods from the experience and needs of the learner.

Learning by doing: Learning by doing is effective in creating behavioural change, awareness of new ideas, and functional literacy and has been part of literacy programs in Ecuador, Tanzania, Guinea, and Sudan (UNESCO/ UNDP 1976, p. 167). It has also been used with limited success in Iran where evaluation of work-oriented literacy showed that the participants adopted new ideas from practical demonstrations if they were independent farmers, i.e., in a position to make immediate use of the ideas, and that demonstration fields were an important centre for all farmers whether or not they attended the literacy course. The evaluation results substantiated the value of creating demonstration fields in communities where work-oriented literacy programs were launched; the fields contributed significantly to the adoption of new crops and farming practices by older and independent farmers.

Group approach: The preference for working in groups has been expressed in many reports and project descriptions, but as Oxenham pointed out (1975) there is not much research on it. He stated that there is an "informal consensus" supporting group participation, especially in initial learning. There are two prerequisites for working successfully with a group: the members must have similar ability, interest, and attendance, and they must constitute a manageable number — according to Gray (1956, p. 164) not more than 20 students. Working with a group provides opportunities not available in individual or mass instruction; members reinforce each other, discuss, argue, and enjoy a sense of camaraderie, drawing on their practical experience for contributions. The literature has indicated that, more and more, instructors are combining methods such as reporting, class discussion, audiovisual aids (particularly filmstrips and posters), individual and group use of textbooks and reading cards, field visits, and practical demonstrations. Familiar signs, sayings, and songs are also used effectively, according to Gray's research (1956, p. 196).

Education-as-cultural-action: Consciousness-raising or education as cultural action through literacy has been brought to the fore by Paulo Freire. Since the late 1960s, Freire's ideas about literacy and education have become known and discussed, and his methods have been the subject of stimulating debate within literacy circles. In the early 1960s Freire worked in

northeast Brazil and later, working in Chile, refined his ideas. In 1977, Freire was working closely with the education authorities in Guinea-Bissau.

Freire has steadily refused to allow the methods he used in Brazil and Chile to be categorized and put into "cookbook form" for others to copy. His writings and seminars have always stressed the fundamental principle that all education has ideologic or political implications. He has argued that methods vary from one culture to another, according to stages of consciousness and political awareness and has been instrumental in making the point universally heard, if not accepted, that literacy is a political act. Another of his major contributions to education was his teaching that people can liberate themselves. Literacy is one step on the way to personal and social liberation. (Freire's translator has defined the concept as "learning to perceive social, political and economic contradictions and to take action against the oppressive elements of reality.")

Freire's method of literacy education derived from basic principles that, at the risk of oversimplification, can be reduced to three:

- Active participation of the learner in shaping the content and process of learning;
- Dialogue of equals among the learners and the group leaders as the basic dynamic of the learning situation; and
- Collective and critical study of the immediate social environment as an integral part of the learning process.

Reports from Brazil and Chile have claimed that through 45 hours of politically and socially conscious meetings, peasants learned to read and write 500 words (Portuguese or Spanish).

While in Tanzania, Freire made an exception to his rule and outlined some of the steps in his literacy method:

- Select an area that has a common language, a relatively high degree of cultural homogeneity, and a relatively high degree of shared problems;
- Study the reality of the area through dialogues with the people;
- Identify generative themes as the basis for deepening discussions and for further analysis;
- Identify generative words from the syntactical expressions of the people and the words that codify the issues they discuss. The criteria for word selection are that each word must have three syllables and, when broken down, form other two-syllable words; each word must have strong social-emotional meaning and should have precise meaning in a practical setting; and each word should represent one or more linguistic realities.

Used in Tanzania, these steps elicited the following Swahili words, which linked concepts for discussion and consciousness-raising:

Urira, wages (minimum wages/salary);
Kazini, at work (nature of work, urban subservient work);
Maendeleo, progress (fighting underdevelopment);
Chakula, food (nutrition, food prices);
Safiri, travel (transportation difficulties);
Tabia, custom (use of wigs, make-up, mini-skirts); and
Utegaji, laziness (how change is undermined).

In several experiments in Tanzania, the teaching method was to:

- Introduce a generative word with a picture or illustration (the participants studied the picture and interpreted what they saw. A discussion ensued, based on the issue as the people in the group identified it);
- Reintroduce the word without the picture, asking the group to repeat it;
- Break the word into syllables so that the group can see and hear how each syllable is pronounced;
- Write the syllables with the syllable families — for example,

Sa	Fi	Ri
sa	fa	ra
se	fe	re
si	fi	ri
so	fo	ro
su	fu	ru

- Encourage learners to use the syllables and create new words, such as *sifa* (praise) or *safi* (clean).

In his description of the Tanzanian experiment, Gulleth stated: "... When the first participant stood up and built a new word (*siri* secret) the effect on the others was electric. In fact, they applauded him. Others immediately wanted to build other words" (Gulleth and Olambo 1973, p. 36). In the first lesson, the participants discovered that they could react to words and read them.

The greatest contribution of Freire to education has been to emphasize the process of humanization. The end point of education is not a set of facts and specific skills but a consciousness, an awareness, of the world and a sense of confidence that has been denied the illiterate — and others. Learning to be active and critically aware involves not only intellectual skills but also development of sensory perception, emotional empathy, and sensitivity. The alphabet, like any other tool, is a technical instrument to be used for the liberation of people; literacy is the skills to use it.

Reading Research

The research on reading has for the most part dealt with the acquisition of skills among children; however, there are some findings that should be noted by adult educators.

Frank Smith, in a paper presented to the International Reading Association Conference in 1976, categorized reading research according to the theories of reading:

> ...Many theories see reading as a process that begins with the print on the page and ends with some representation or interpretation inside the brain — I shall call such theories outside-in. The other class of theories perceive reading as being a highly discriminatory process that begins in the brain and ends with selective attention to only part of the printed text — I shall call such theories inside-out. Outside-in theories are clearly dominant in both the research literature and instructional development...my own position is with the minority.
>
> Outside-in theories are characterized by the notion that everything

on a page of text is 'processed' and that reading is primarily a hierarchical series of decisions — first letters are discriminated, then they are synthesized into words (usually but not always through 'decoding' into phonological or 'underlying' levels of spoken language) as a consequence of which comprehension takes place . . . .They also account for a large proportion of the studies reported in *Reading Research Quarterly* and predominate in most psychological and linguistic speculation about reading . . . .Almost all of the experimental work that has proved the conceptual basis for outside-in theories of reading has been done with tachistoscopic equipment and meaningless materials in unmotivated laboratory situations.

My main criticism of outside-in theories is not so much that they are wrong as they are not representative. They provide reliable and replicable data about how individuals respond when confronted with atypical 'identification' tasks in laboratory settings, but in fact bear little resemblance to what takes place when individuals normally read . . .anything that is interesting or informative to them. More specifically, outside-in theories fail to account for *intention* (we usually read for a purpose), *selectivity* (we attend only to what we want and need to know), *prediction* (we are rarely bewildered or surprised by anything that we read), and *comprehension* (we are rarely aware of the enormous potential ambiguity, both syntactic and semantic, of the most common words and constructions of our language) . . . .

The inside-out view in fact begins with intention — it regards reading as a truly active, centrally motivated and centrally directed process in which the reader hypothesizes, or predicts, among a certain range of meaningful likely alternatives and searches and analyzes among the featural information available in the print, only to the extent necessary to resolve his remaining uncertainty (Smith 1976, p. 3–5).

Although both inside-out and outside-in approaches draw upon linguistic and psychologic research, the nature of the research is influenced by the definition of reading.

Some researchers have stressed the decoding aspects of reading and would define reading as "the creation of the sound form of the word according to its graphic model" (Downing 1973, p. 33). Others have emphasized the cognitive activity of reading and would work from the definition: reading is not a simple mechanical skill, nor is it a narrow scholastic tool. Properly cultivated, it is essentially a thoughtful process. It should be developed as a complex organization of patterns of higher mental processes. It can and should embrace all types of thinking, evaluation, judging, reasoning, and problem-solving (Downing 1973, p. 33).

Much of the research referred to by Smith as outside-in would not be helpful in promoting literacy because this work has not emphasized reading comprehension in real situations.

The studies that view "intention" as central to reading behaviour probably would be more useful to literacy program planners and practitioners. Thus a great mass of reading research should be relegated to the shelves by those focusing on Third World adult literacy problems.

There are other problems in gleaning useful data from research studies. Most of the reading research published has been done in English, and on the English language, in North American or European cultures, and with children. The usefulness of this research for developing countries is limited. As John Downing said, in his book, *Comparative Reading:*

> . . .Ethnocentricity pervades the professional literature in the reading field. Because theory and research on reading developed earliest in countries where alphabetic writing systems prevail, particularly in the United States, non-alphabetic systems have been given scant attention. When they are looked at, it is usually through ethnocentric alphabetic blinkers. The few cross-national investigations of reading that have been conducted have focused on the regularity of grapheme-phoneme relations, probably because they have been inspired by this obvious feature of alphabetic writing systems (Downing 1973, p. 148).

Alphabetic writing systems are those in which the characters represent phonemes of the language (phonemes being basic sounds of spoken language), e.g., English and Hindi; although many languages are based on the alphabetic system, there are examples of other systems. Syllabic writing systems are those in which the characters stand for syllables rather than phonemes, e.g., Japanese and Cree; logographic writing systems are those in which the characters represent morphemes (that is, units of forms and meaning) rather than units of sound such as syllables or phonemes, e.g., Chinese. Several of the Third World languages are classified as syllabic or logographic, and, on these languages, there has been very little research.

Not only does culture influence the learning of language but learning how to learn is culturally influenced, as Edward Hall, in *Silent Language* (quoted in Staiger 1973, p. 18) stated:

> . . .People reared in different cultures learn to learn differently. Some do so by memory and rote without reference to 'logic' as we think of it, while some learn by demonstrations but without the teacher requiring the student to do anything himself while 'learning'. Some cultures, like the American, stress doing as a principle of learning, while others have very little of the pragmatic. The Japanese even guide the hand of the pupil while our United States teachers usually are not permitted to touch the other person. Education and educational systems are about as laden with emotion and as characteristic of a given culture as its language . . . .The fact is that once people have learned to learn in a given way, it is extremely hard for them to learn in any other way.

In other words, many of the indicators of success used rather consistently in Western cultures are questionable when used in other cultures, and, recommendations about the teaching of reading are culturally biased. More work needs to be done on Third World languages and the cultural reality they represent. According to Edward Sapir:

> . . .The relationship between a reader and his culture is an intimate one. Not only is his language very closely tied up with his thinking about regional and social processes, but the fact of the matter is that the 'real world' is to a large extent unconsciously built upon the language habits of the group. No two languages are ever sufficiently similar to be considered the same social reality (quoted in Staiger 1973, p. 17).

It is difficult to know whether the findings of reading research on children are applicable to adults. Downing (when interviewed November 1976) felt that much could be transferred to adult literacy and that adults should be able to comprehend more easily and faster because they have many more years

of experience with the oral language and, hence, more cognitive experiences. An adult may also bring more inner motivation to the reading task, based on a personal need and desire, but more studies on adults and reading are needed. Gray, in *The Teaching of Reading and Writing*, noted specifically the differences and similarities between what is appropriate for children and adults.

Writing Systems

It has been found by many researchers, and summarized by Dina Feitelson, that: "If the graphic symbols the beginning reader has to learn to identify are very complex, with many strokes, curves and serifs in each of them, his task will be much harder than if they are relatively simple" (Staiger 1973, p. 23).

The reader examines the graphic symbols and compares them to his or her stored knowledge of graphic symbols. Those at the early stages of reading, who are laboriously trying to translate the symbols into language units, find that the task is simplified if the symbols are uncomplicated and are consistent within the spoken language.

> . . .While a vast literature has sprung up around the problem of symbol-sound correspondence in English, little has been done so far in comparing in this respect, writing systems of different languages. While no authoritative data are available at present, there can be little doubt that crucial differences in the way writing translates to speech pose completely different sets of problems to beginning readers in different languages . . . .it is of interest that in the sometimes heated controversy about the relative merits of various methods of teaching the beginning reader, there seems to have been little awareness of the way in which special features of the writing system necessarily influence the success of any particular method (Staiger 1973, p. 35).

Downing has devised a way to classify different methods of instruction for written languages, whether alphabetic, syllabic, or logographic:

> . . .Atomistic decoding and meaningful chunking represent. . .two extremes. Whether one is dealing with letters that represent phonemes, or a syllabary that signals the relevant sound group, or logographs that signify morphemic units, the same alternatives are available. One can begin by emphasizing the atoms of written language, for instance, either in the separate letters or written words in English, or in the radicals of Chinese logographs. Or, one can put the emphasis on the larger chunks of written language that convey linguistic meaning. In parallel with this, the alternative emphases are the 'mechanics' of the decoding task versus its 'communicative function' (Downing 1973, p. 149).

His approach to classification is more useful than is the grapheme-problem approach, which suits alphabetic writing types but not logographic. Of course, both "atomistic decoding" and "meaningful chunking" have a place, but the question is which approach should be emphasized at the initial stage of learning to read and write.

The small minority who strongly desire to become literate will not be deterred by inappropriate methods, materials, etc., but to reach the majority, literacy workers must rethink traditional approaches.

Appropriate Methods

William Gray outlined some principles that help in selecting appropriate methods:

> . . .if the primary emphasis is placed on word recognition, the outcome is the ability to follow the printed lines, to pronounce all the words, but to display no vital concern for the content. It produces what is familiarly called word reading. This is not the complete attitude of the mature reader. The method goes far in the development of word recognition, an ability which all pupils must ultimately develop. It does not help the pupil to read so as to grasp the sense. On the other hand, when the chief emphasis is placed on the thought. . .the pupils become

interested in content, but develop more slowly in word recognition and in ability to follow the lines (Gray 1956, p. 198).

...It would appear that emphasis on both meaning and word recognition is desirable from the beginning. A long experimentation at the University of Havana, Cuba, shows that this applies to adults as well as to children. The aim of the study was to determine the relative merits of the syllabic, word and sentence methods in teaching adult illiterates. At the end of each year, tests were given in word recognition and comprehension. The three methods were then revised accordingly. As a consequence of the changes made each year, the three programmes have become increasingly similar, emphasizing both meaning and word-recognition skills from the beginning. The chief difference was the size of the language unit used in the first reading lessons — in two of the methods, words, in one, sentences.

This practice follows the eclectic trend ....Both studies support the view that ability to get meaning and recognize words should be developed concurrently. The nature and extent of training in word analysis that children should receive during the early stages are still open questions. Because of their greater maturity and more analytical habits, adults may be taught word analysis to advantage from the beginning. Attention to meaning should not be sacrificed, however (Gray 1956, p. 111–112).

Methods of teaching do not lead to the same results among all members of a group. For example, reporting comparative studies of teaching methods in the USA and Scotland, Gray concluded:

...Even in studies that indicate some degree of superiority of one method over another, the impressive fact is not the difference between the average scores of schools using different methods, but the wide range of average scores made by schools using the same method, and of individual scores within each group. These findings seem to apply to children in all parts of the world. Comments and evidence presented by teachers of adults suggest that they apply at that level too. Obviously, factors other than the method used influence progress in learning to read. This conclusion should not discourage people from trying to discover the best method for specific purposes, but it means that the method used is only one of many factors that must be considered when reading programmes are planned (Gray 1956, p. 107).

Learning Stages

For one thing, individual differences influence readiness to learn to read. According to Gray, a number of factors need to be present in the learner before there is "reading readiness":

- Sufficient mental ability to learn to translate the printed word into meanings;
- A compelling interest in learning to read;
- A clear recognition of the fact that printed or written words represent meanings;
- Familiarity with the things and activities that will be referred to in early reading lessons;
- A wide speaking vocabulary and command of language;

- Ability to think clearly and use existing knowledge to grasp new meanings, see relationships, make choices, and solve simple problems;
- Ability to attend to the task at hand, to listen and look carefully, and to distinguish the important and relevant in what is seen and heard;
- Ability to interpret pictures;
- Ability to work with others and to adjust readily to various learning situations; and
- Freedom from disease, worries, and emotional tensions, all of which distract attention and effort from learning.

The teacher and the community can and should take steps to promote readiness.

Learning to read can be broken down into four stages. Stage one is preparing for reading. Stage two is establishing initial reading attitudes and skills. Stage three is growing in reading skills, and stage four is acquiring reading habits. Gray has said that stage two begins as soon as the students clearly wish to learn to read. The chief goal sought is ability to read simple materials with attention focused on meaning, such as signs, letters, and simple directions. This goal is the "minimum literacy standard" of the past and is a milestone toward functional literacy.

The specific aims of stage two, which are substantially the same for all languages, according to Gray, are:

- To deepen interest in learning to read;
- To promote increased readiness for reading;
- To cultivate a thoughtful reading attitude and a demand for meaning in all reading activities;
- To develop a sight vocabulary of carefully selected words of high value in meeting the simplest reading needs of adults;
- To develop skill in recognizing new or unfamiliar words accurately;
- To promote a clear grasp of what is read;
- To cultivate the habit of reacting thoughtfully to what is read, of applying the ideas to solving problems;
- To stimulate interest in reading for pleasure and information; and
- To stimulate a desire for greater ability in reading.

Learning to Write

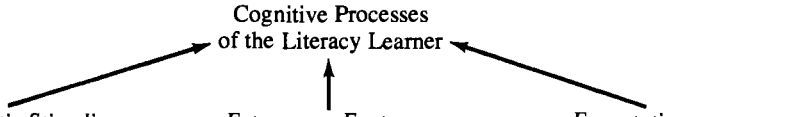
Listening, speaking, reading, and writing are the major components of the language arts. Listening and speaking are recognized preparations for learning to read; writing is also part of the process of learning to read.

> . . .Practically all specialists in the language arts favour the introduction of reading and writing at about the same time. They maintain that the progress made in the one contributes to progress in the other. The writing of words calls attention to their detail, helps to distinguish one from the other, and to build up a reading vocabulary.
>
> Freinet submitted evidence that writing is a very valuable aid both in developing readiness to read and in hastening progress in reading. Hindreth, summarizing many objective studies, says that 'writing reinforces word recognition and sentence sense. It increases awareness of the characteristic features of words' and helps pupils 'in building a sight vocabulary'. It also contributes directly to spelling ability. Fernald has

supplied convincing evidence that the kinaesthetic method, which uses much tracing and writing, is very effective with pupils who encounter difficulty in learning to read. Beyond the early stages of learning to read, writing activities have also proved very valuable (Gray 1956, p. 114).

A Model

In *Comparative Reading*, John Downing developed a model of literacy acquisition taking into account the great variations and similarities that occur in the linguistic and cultural environment .



Linguistic Stimuli:
The literacy learner's past (and current) experience of spoken language.
The literacy learner's current experiences of written language, the writing system.

Extraneous Factors:
Individual differences in abilities and temperament. Differences in environment, school system, and parental attitudes.

Expectations:
Perceptions of the "proper" languages or dialect in which reading responses should be made.

Downing pointed out that in the model, the cognitive processes of the literacy learner were placed at the centre deliberately for two reasons: (1) there are universal psycholinguistic processes in learning to read and write in all languages and under all cultural conditions and (2) these universals are cognitive rather than perceptual and central rather than peripheral (Downing 1973, p. 69).

Downing saw the purposes and implications of his comparative work as follows:

> . . .The proposition that is the basis of this book is that by making comparisons between the reading behaviours of people in different cultures and in varying languages we can understand better the fundamental psycholinguistic processes of reading and writing and the way in which these develop (Downing 1973, p. 8).
>
> A day should come when the teaching of beginning reading in any language will be regarded as a configuration of a finite number of specific problems which have to be dealt with. Understanding the way any one of these problems was solved in another language may help the educator of the future to benefit from the experiences of his peers in other countries (Downing 1973, p. 246).

If Downing's forecast is ever to be realized, basic research in languages other than English and in cultures other than European-American is needed and must be more widely distributed than is existing research.

Albert Harris and Eve Malmquist, in their chapter, "Research in Reading," in *The Teaching of Reading* (IIALM 1977) noted that developing countries must improve their educational systems to get maximum benefit from limited resources, and they suggested a sequence: survey information from other countries; survey local educational conditions; develop relevant measuring instruments; plan and implement small-scale development pro-

jects; and then do careful evaluative research. They also pointed out that the first step — to find out what is going on in other countries — is difficult because the results of research in reading have not been widely distributed. According to Harris and Malmquist, an international clearinghouse for reading research should be set up. To some extent, the International Institute for Adult Literacy Methods in Tehran could undertake the task, extending its focus consciously to include reading research from around the world.

Gray summarized reading research in 1956 and updated his book in 1969. He dealt with reading and writing for both children and adults. Other worthwhile studies are those of Osterberg and Downing. If the good ideas that already exist about the teaching of reading were assembled so that educators in the developing countries could make choices based on them, then much research could be done on the effectiveness and implications of existing information.

Language of Instruction

> . . .Literacy is like money. If you have much money and there is nothing you can buy with it, that money is useless. Literacy is useless if you cannot communicate through it with other people. You see, if you have much money which cannot be used in your country, that money is useless. The same is with literacy in a foreign language in villages like ours. Literacy in a foreign language is like foreign currency. Both are useless, or at least almost useless (Mohamed 1975, p. 72).

This statement made by a neoliterate rural worker in Somalia reinforces the accumulated evidence from literacy experiences and reading research that instruction — even initially — should be in the learner's mother tongue. The use of the vernacular creates interest in learning, contributes to lower dropout rates, and instills pride in traditional culture and oral literature, as has been found in programs in Mali, Nigeria, Peru, Vietnam, the Soviet Union, Ethiopia, Somalia, and Tanzania.

The choice of the language of instruction is a problem for multilingual countries, such as those of Africa and India. Certain countries and regions face decisions relating to an inherited colonial European language, which has become the language of power (political and administrative), several strong regional-based languages, and many local dialects and languages. The consensus in many African countries has been that bilingualism or multilingualism is the answer: the official national language and at least one other widely used African language.

Language policy — and planning for it — must become an integral part of education reform and of social and cultural development strategies. The notion that the promotion of the mother tongue impedes national unity is undergoing reconsideration because of events in the Third World that present diversity as a rich resource not a threat. The Zambian program for educational reform stated that teaching English is not a goal of the national literacy program. "The war on illiteracy will be conducted through the medium of Zambian languages. The aim of the campaign is to teach every illiterate Zambian to read, write, and reckon in a language he knows well; the aim is not to teach a new language under the guise of teaching literacy" (Zambia 1976, p. 22).

In Mali, a student learns one of four mother tongues and later learns French, the official language.

Language planning is increasingly a part of national development planning, according to such writers as Das Gupta, who defined literacy planning as:

> . . .nationally planned measures for changing the rank, function, and the content of one or more languages in a country, backed by public sanction and encouragement, for objectives pertaining to national development (Das Gupta 1976, p. 382).

In his book, *Comparative Reading*, John Downing pointed out that the literacy learner's environment may produce three difficulties:

- There may be a mismatch between L-1 and L-2 (L-1 being the mother tongue, the first language; L-2 being the language of instruction when it is not the mother tongue);
- There may be a mismatch between the writing system and L-2, even though the latter closely approximates the standard model on which the former is supposedly based for teaching purposes; or
- There may be a mismatch comprising both the preceding mismatches.

The literacy learner's task is to understand how a writing system is related to spoken language, sorting out the logical relationships between these two aspects of language. The more mismatches that occur in a child's linguistic environment, probably the greater the confusion he or she experiences initially in learning to read and write (Downing 1973, p. 182). "It is most important to avoid increasing cognitive confusion in the first experience of problem solving involved in understanding the nature of the task of learning to read. If the level of cognitive confusion becomes too high for the beginner, he receives a setback from which it is very difficult to recover" (Downing 1973, p. 183).

Supporting Downing's comments is Nancy Modiano's research in Mexico comparing two groups of Indian children. One group learned to read their native Indian tongue and in the 2nd year of the experiment learned Spanish reading. Another group was taught Spanish reading only. When both groups were tested, the former scored significantly higher in reading Spanish. Modiano concluded: "The youngsters of linguistic minorities learn to read with greater comprehension in the national language when they first learn to read in their mother tongue than when they receive all their reading instruction in the national language" (Downing 1973, p. 183).

Along the same lines, another study was done in Sweden.

> . . .Osterberg compared an experimental group that was instructed in dialect D(1) with a control group that was taught as usual in the standard language D(2). About 350 pupils were allocated randomly to the two groups, and so were their teachers. Subsequent testing demonstrated that the children in groups D(1) and D(2) were equivalent in school readiness and intelligence, and in other variables also. Training of the teachers and standardization of their methods were equated too. Group D(1) began with a ten weeks' period of instruction in the Pitea dialect, while group D(2) received parallel instruction except that it was in standard Swedish. A basal reading series was used that was new to all the teachers in both groups. The content was identical in the D(1) and D(2) readers, except that the text was translated into the Pitea dialect in the former. After ten weeks, several tests were administered and a further instructional period of twenty-five weeks began in which both groups were instructed in D(2), except that group D(1) was given a gradual transition from D(1) to D(2) in the first four weeks of this second period.
>
> The tests at the end of the initial ten weeks of instruction found the D(1) group to be significantly superior in oral reading, reading rate, and comprehension. The differences were large, and Osterberg comments that 'What first and foremost characterizes D(1) pupils' lead is the mastery of difficult aptitudes in reading techniques which we called articulation and the ability to combine and read off both words and

word-groups. Thanks to the sureness many of them had already gained in articulation for instance, they have also to some extent begun to read fluently.'

These tests were, of course, administered in D(1) to the D(1) group and in D(2) to the D(2) group. At the end of the second experimental period, all tests were given in D(2) to both the D(1) and D(2) groups. Therefore, at this point, the D(2) group was being tested in the language in which it had received instruction for thirty-five weeks, whereas the D(1) group had been exposed to D(2) materials for only twenty-five weeks, or somewhat less if one takes into account the four-week transitional period. Yet in reading D(2) material, the D(1) group surpasses the D(2) group.

Osterberg's results provide strong evidence that mismatch between D(1) and D(2) is an important handicap in learning literacy. Furthermore, his finding that initial D(1) instruction is superior in transfer to D(2) reading firmly fixes the temporal locus of the trouble. Mismatch has its ill effects in the first initiation phase of learning literacy (Downing 1973, p. 190).

These studies have important implications for literacy programs in developing countries. Often, there has been a hesitancy, on behalf of the literacy program planners and implementers, to use the local dialects and languages for the medium of instruction. Usually, the reason is that the eclectic teaching method has been used, based on standard reading materials. The eclectic approach is less demanding than the learner-centred method for literacy teachers who are not well trained, and in many countries there is a different dialect/language every 100–150 km, and even statewise programs, let alone nationwide programs, cannot be planned and implemented in the mother tongue. Furthermore, the people will probably be forced to read primarily in a second language, given the shortage of materials available in small dialects/languages.

Teaching in a newly transcribed mother tongue may present some special problems. In Mali, for instance, the decision was taken to use four widespread and representative languages in initial literacy training and then to introduce French, the official language.

The four African languages were also spoken in other West African countries, and this fact created a dilemma: should Mali go ahead on its own to unify the transcription system of its languages when they were spoken in other countries as well? (The requirements of the task included the selection and invention of words to express mathematical and scientific concepts.) The Institute of Functional Literacy and Applied Linguistics undertook the work, and the success of the adult literacy program has prompted the use of the four national languages in the formal school system, the educators expecting to save several years in the teaching of reading, writing, and arithmetic.

On choosing a language of instruction in Africa, Maurice Houis (1976, p. 393) wrote that African countries, on the whole, must take a bilingual route and that bilingual education poses a fundamental question: "what are the pedagogical functions of the two languages concerned and how can we ensure that these functions are evenly balanced, bearing in mind the various situations prevailing in the different states?" (Houis 1976, p. 394). He outlined three pedagogical functions that must be evenly balanced in a bilingual education system:

> . . .The first function is the acquiring of writing in the language with

which a person is most competent and not merely giving precedence to the oral.

The second function is that of language as the general medium of instruction. This medium may or may not be, or may be only partially, the language in which the child has learned to write. The choice depends upon the assessment of the capability of the language to express semantic fields involving unfamiliar or modern ideas.

'Should an African language be chosen to perform the function of the general medium of instruction? This presupposes that appropriate educational materials and teacher-training courses exist, and also that necessary work has been done to standardize the presentation of the words and utterances to the new nations.'

The third function is that of language as a subject in the curriculum. This presupposes that the African language has been the subject of descriptive survey and that applied linguistics can draw on the findings of fundamental linguistics (Houis 1976, p. 394).

The experience of the Soviet Union in developing national bilingualism is instructive. It came about through conscious political commitment and sustained follow-through. In 1919, the Soviets guaranteed the right to education in national languages, agreeing to organize training of teachers and an educational system in the national republics and to create the necessary conditions — such as a publishing program — to ensure the development of national literatures and arts. The result was a contemporary language life characterized by a dual and complementary process: development of national languages and widespread knowledge of Russian as the language of international communication. As stated by Desheriyev and Mikhalchencko:

> . . .The Russian language serves to common needs of the Soviet people — their mutual intercourse and the exchange of cultural values — while the local national languages serve the needs of individual nations and nationalities in keeping with their individual requirements (1976, p. 392).

In choosing the language of instruction, literacy planners must ensure that the language or languages chosen are useful and relevant. A working paper for the symposium on problems of education in the mother tongue in subregions of Africa, held in Dakar in 1976, stated:

> . . .so long as the African language is not the official medium used in education, the administration and public relations, and has no legal status, it enjoys less prestige; and measures to promote it may meet with opposition from public opinion. A language which is not used as the medium of instruction seldom has the same standing as one which is; and children and adults need to be specially motivated to learn a language outside of school (UNESCO/BREDA 1976, p. 9).

In recommending proposals for action, the paper said:

> . . .The national decision to promote one or more African languages to the status of official language(s) or language(s) of instruction calls for a vast national campaign designed to make the general public, and more particularly the teachers responsible for putting the decision into effect, aware of the problems presented by the use of the vernacular. . . .The

> responsibility for co-ordinating the campaign would lie with national committees, governments or private bodies with the necessary authority and assisted by the specialists concerned. Though both the structure and the powers of such bodies would reflect national particularities, they would normally be responsible not only for planning the linguistic development of the widely used — vehicular — language selected as the medium of instruction, but also for promoting and safe-guarding all the vernacular languages (UNESCO/BREDA 1976, p. 11).

Other sources have suggested the following be taken into account:

- Although teaching in the mother tongue is educationally sound and desirable, it can be expensive. It demands a well-planned infrastructure and investment in linguistic research, in preparation of teaching materials and postliteracy materials, in teacher training, and in explanations to the people as to why certain languages were chosen and how learning them simplifies learning a second (or official) language.
- The involvement of linguists in literacy planning is essential to ensure that the materials and the teaching methods relate specifically to the selected national language(s) and not to form and methods borrowed or translated from another language.
- The existing language, especially if it is associated with an elite or educated class, should be made relevant and possibly simplified for the average person. For example, in China, a program is under way to reform the written language using a phonetic alphabet and to simplify the characters. At present, of the 3000 plus, often-used characters, 1200 have been simplified and in some areas, people have been taught phonetic alphabets first and then the corresponding characters (Hsiao 1975). Simplification is also a factor in the learner's attitude toward — and ability to learn — a language. In his report on the Iranian experiment, Furter noted that the gap between the literate and the illiterate is especially wide in Iran because Persian has become an eminently literary tongue:

> ...As the great literary works, symbols and illustrations of the national culture were written not in Persian but in Arabic script, the present transcription, although it does not render the vowels satisfactorily, has become untouchable. The experts of the Iranian project found little response or understanding when they sought to interest the linguists of the country in the study of a number of technical difficulties such as the systematization of written forms . . .the simplification of the spelling or the revision of an excessively complicated grammar (Furter 1973, p. 9).

- The transcription of spoken languages means decisions concerning the type of alphabet and script. In many cases, Roman script has been adopted to facilitate the learners' transition to internationally spoken languages, one of which may be the official language. Somalia had the option of Arabic or Latin script and chose Latin, and in Mali, the Latin alphabet was chosen because the official language is French. In Peru, Indian languages were conformed to Spanish, the dominant language of trade and power. The Soviet Union decided its national languages would use the Cyrillic alphabet to correspond to Russian.
- Decisions concerning transcription and standardization of alphabet

should take into account similar and "contact" languages (unofficial second languages used between people who do not have a common first language). The Bamako conference of West African countries in 1966 attempted not simply to transcribe the language of a country but also to bring that language closer into line with the transcription system of various West African languages. Although the conference was not successful in the attempt, it did recognize the problem.

- The UNESCO symposium on the problems of education in the mother tongue (1976) stated the importance of regional and subregional cooperation in the production of teaching materials for a single language or a group of languages and for teacher training and linguistics study. The First Arab Regional Conference on Illiteracy Among Workers emphasized a pan-Arab regional strategy for literacy (Whitehouse 1976). As Melvin Fox has pointed out (1977), despite the widespread and persistent function of Arabic as a contact language, its impact in this regard has been virtually ignored. Many people who speak African languages are familiar with Arabic script and much of its vocabulary. Thus, according to Fox, the potential of Arabic for literacy and adult education is immense. Little attention has been given to how a Moslem's knowledge of Arabic in a nonArabic-speaking country could be used as the basis for literacy learning in an African language.
- Fox (1977) suggested that greater use should be made of contact languages. For example, three of the contact languages in Africa — Swahili, Manding, and Hausa — are spoken by 100 million people. Fox recommended that organizations such as the West African Linguistic Society design a research agenda for determining which contact languages cut across country and language boundaries. Such regional investigations of contact languages in other parts of the world could bring about cost savings in materials and teacher training.
- Using the mother tongue of a learner enhances pride in traditional culture and oral traditions and acts as a motivator. In Mali, for example, the decision to use mother tongues as the languages of instruction triggered a broad surge of interest in the traditional languages, cultural, and oral literature and contributed strongly to the learners' motivation and to the literacy program's success (Dumont 1973, p. 22). Furthermore,

> . . .Functional literacy in his own language shows the peasant or worker that written communication is not necessarily a magic key to the outside world — it can be useful to him in his world and enable him to advance in his job. . .and to move outside the narrow cubicle in which he previously felt enclosed. . . .The cultural effect is so obvious that some people think it more important than other effects, and many adults, having been educated in French, are learning to write the Bambara or Fulani languages so as not to lag behind their parents who have no education (Dumont 1973, p. 62).

The Timetable

Class sessions vary from 45 minutes (Sudan, Pakistan, Iran) to 2 hours (Ecuador, Ethiopia, Iran, Mali, India, Jamaica, Brazil, Vietnam), with approximately half an hour being spent on new information. The Adult Basic Education Society in Pakistan (Rainsberry 1974) observed that adults can

Table 1. Grade-level equivalents and numbers of hours of instruction for literacy programs in EWLP countries.

Country	Achievement level	Hours/course
Algeria	Grade 4	426
Ecuador	Grade 4	548
Ethiopia	Grade 2	700
Guinea	-	384
Iran	Grade 5	450
Madagascar	-	324
Mali	Grade 2	686
Sudan	-	235
Syria	Grade 2	480
Tanzania	Grade 2	270

Source: UNESCO/UNDP SIPA 2 (1975).

efficiently learn and retain only about 20 minutes of intensive new materials. Although a 2-hour class may appear long, the time would not be unreasonable if devoted to review, new learning, and consolidation. The classes should be long enough (more than 1 hour) so that the learner sees some results within the first few lessons.

It is difficult to discover, even from statistical tables, the precise duration of many programs or exactly what is meant by "1 week" or "X" number of hours. It appears that most literacy programs have classes at least three times a week and are divided into two stages generally described as "basic" and "functional," with each stage roughly corresponding to 1 year, allowing for harvest intervals, etc. The time allotted to the first stage ranges from 26 to 38 weeks.

The conclusion of the EWLP evaluation prepared by UNESCO for the International Symposium for Literacy (UNESCO/UNDP, SIPA 2 1975) was that *on the average* "with considerable variation from one country or language to another, adults are able to master the basic skills taught in primary schools in 200 hours." At 6 hours per week (three sessions of 2 hours each), this would mean approximately 35 weeks or 10 months. However, the same document stated that when literacy was integrated with technical, linguistic, didactic, scientific, or mathematics content (Table 1), the teaching-learning process:

> . . .generally lasted for two years corresponding to harvest cycles in agricultural programs. The average length of a program was 483 hours, spread over a period of 60 to 75 weeks according to the country. It is not possible to define the optimal length of time span for the educational process on the basis of experiments undertaken; they vary with the type of training, the previous experience and level of the participants, the quality of the instructors and various local conditions (UNESCO/UNDP, SIPA 2 1975, p. 20).

Some examples of timetables are worth noting. In Vietnam, where the language is easy to learn, it was found that an ordinary person studying 1

hour a day could learn to read and write within 3–4 months. At the height of the mass literacy movement, the organizers held competitions that reduced learning time to 72 days. Furthermore, it was reported that adults in the complementary education program, a follow-up to basic literacy, could complete the first cycle of the grade 7–10 school curriculum by studying 5–6 hours a week for 3–4 years.

In the two-phase, mother-tongue plan adopted by Mali, each phase is 20–24 weeks, which corresponds to 1 year of instruction with time off for agricultural demands. The first phase comprises basic reading, writing, computation, and technical application. The second phase centres on economic and civic education. An experiment in one literacy centre in 1971 showed that a crash program of 50 lessons, or 8 solid months of regular sessions, produced results similar to the 2-year program and was successfully repeated in three centres in the cotton zone.

In Brazil, the MOBRAL functional literacy program comprises daily 2-hour classes in Portuguese; at the end of 5 months if progress is not satisfactory, then the program is extended for another month. The follow-up program provides approximately 720 hours of part-time instruction, is considered equal to the first four elementary school grades, and can be accomplished in 2–3 years, depending upon the intensity of the program.

India has a 1-year program in basic Hindi (2 hours a night, 5 nights a week), and allowing for harvests, festivals, etc., the actual learning time works out to 8 months. Other programs, conducted through Literacy House, Lucknow, are similarly based on an 8-month period: 3–4 months using the basic primer and 3–4 months for follow-up consolidation.

In the first adult literacy programs introduced in 1966, in Iran, students were expected to acquire the rudiments of reading and writing Persian in 4 months and to review and reinforce their learning in a second 4-month cycle. Evaluation proved that the two 4-month cycles were inadequate to produce enduring literacy. A program of two 9-month cycles was introduced along with new materials and methods of training. The functional literacy program in the Yazd Textile Industry introduced in 1974 has a program of 50 weeks of instruction divided into two courses of 6 months. The objective is to teach reading, writing, and simple arithmetic.

Jamaica's course is approximately 400 hours to achieve level 4, which corresponds to 6 years of primary schooling. The estimate is that it takes 18–24 months of 2-hour classes, twice a week, for a person to become literate. This is why the Jamaican national literacy program launched adult education centres based on intensive classes of 2–3 hours, five times a week.

The lifelong education project in the Punjab, Pakistan, includes functional literacy classes 1 1/2 hours, 6 days a week, for 6–8 months.

In Colombia, Acción Cultural Popular broadcasts by radio three courses of study (basic, progressive, and complementary) for rural people. A local volunteer monitors the programs and advises learners. The basic course in literacy, general reading, writing, and arithmetic is sequential and requires enrollment at specified periods and continuous attendance for completion. A typical class is 1 1/2 hours long and is broadcast 6 days a week. The entire course is 45 hours and takes about 15 weeks to complete.

Originally, the Work-Oriented Adult Literacy Program in Ethiopia was scheduled to have two 10-month stages; however the first stage has

sometimes been lengthened to 19 months because Amharic, the language of instruction, is not the mother tongue of participants and, according to the project personnel, becoming literate in a second language takes a longer time and requires different methods.

In Tanzania, work-oriented Swahili courses were offered daily in pilot areas for 9 months out of each year for 2 years, but evaluation found that the 2-year training cycle was not enough because of agricultural problems and resultant class instability.

Gray (1956, p. 152, 159) identified two related stages of teaching reading to adults that take a broader approach to literacy. Stage one is preparation of attitudes and awareness of the need and value of reading. Stage two begins when students are prepared to learn with reasonable ease; its goal is to enable students to meet minimum literacy standards so that they are on the way to a functional literacy that will secure their skills and establish reading as a habit. Stage two requires some 24–40 class periods of an hour each. He further stated:

> ...The task of promoting functional literacy as now conceived is a far broader one than that of merely arousing enthusiasm for literacy status and the provision of training limited to the use of a literacy chart and a primer. The time required to achieve the broader goals sought will vary among communities but it may be assumed that from 150 to 300 hours of carefully planned teaching will be needed (Gray 1956, p. 152).

Retention of Literacy

A review of the literature on retention of literacy, undertaken by Sheffield for the Education Department of the World Bank (Sheffield 1977) focused primarily on the specific problem of retention of basic literacy and numeracy for primary age children and adults and mainly on material from developing countries. The main findings were that very few empirical studies of retention and of basic skills have been undertaken, compatibility among studies is minimal, and there are enormous problems in making valid comparisons between countries of different levels of development and between adults and children.

Sheffield's investigation did not support assumptions that a basic threshold exists, beyond which school leavers will retain basic literacy skills almost unimpaired and that this threshold is the completion of fourth grade of primary education. He found that the idea of a threshold may be relatively unimportant, if not meaningless, because few individuals or societies are likely to settle for minimum basic skills even if a threshold could be identified. Countries striving to provide 7–8 years of primary school for the entire population are unlikely to consider a 4-year basic cycle a viable policy option. With regard to adults, Sheffield stated that although basic literacy skills can be taught in 2–3 months under favourable conditions, if the skills are not "functional" and if adults lack the opportunity (or materials) to use the skills, then retention is not ensured.

Conclusions about correlations, drawn from empirical studies of adult literacy class retention, are:

- Literacy is often retained better than numeracy;
- Writing skills tend to lapse to a greater degree than reading skills;

- Length of study correlates with retention in several studies, but the short duration of most literacy courses, the wide variations in programs, and effects of outside factors make conclusions difficult concerning the best length for literacy courses;
- Amount of previous (primary) schooling affects retention; lapses into illiteracy are less prevalent among those with 4 years of schooling;
- Family background, social milieu, and other personal factors are significant, as are occupation, family income, and availability of books.

Summary

Most of the reading research published has been done in English, on the English language, in North American or European cultures, and with children, in formal settings. Its applicability to literacy in developing countries, and in other languages, to adults, in nonformal education settings, has not been demonstrated. It is likely that some of it, for instance work by Gray, Osterberg, and Downing, is universal but has not been widely distributed.

Reading research into the effect of writing systems has found that complex graphic symbols — those with many strokes, curves, and serifs — are more difficult to learn than are relatively simple ones. Although this finding is self-evident, it rarely merits consideration in debates about the relative merits of teaching methods. There seems to have been little awareness of the way in which special features of the writing system necessarily influence the success of any particular method.

There are two major categories of teaching methods: eclectic and learner-centred. In choosing the appropriate one for each situation, William Gray has outlined some principles:

- Contrasting methods produce different results. If word recognition is stressed, the learner will read words without comprehension. If emphasis is placed on the thought, the learner will become interested in the thought and be slower to recognize the words.
- Good initial progress in reading results from emphasis on both meaning and word recognition.
- No methods lead to the same results among all members of a group.

The learning-to-read task can be broken down into four stages with specific aims that are substantially the same for all countries and languages. Stage one is preparing for reading; stage two, establishing initial reading attitudes and skills; stage three, growing rapidly in the ability to read; and stage four, acquiring more mature reading habits.

Research has indicated that learning "reading" and "writing" at the same time contributes to progress in both. Writing reinforces word recognition and sentence sense.

Research has shown that at least the first 3 months of instruction should be done in the learner's first language, the time varying according to the language, and that the goal should be "to understand how a writing system is related to spoken language" (Downing 1973, p. 182). Then, the readers can easily learn a second language that provides functional mobility and growth.

One of the most important advantages of the learner's mother tongue is

that literacy learning begins with something that is already known by the learner. This principle, i.e., beginning from the known, can be adapted to basic arithmetic teaching as well. Work undertaken in Iran and Mali, for example, has shown that fast, easy learning and good teacher performance are achieved when arithmetic teaching is based on facts known to the learners and is consistent with their ways of mental calculation.

Also it has been shown that literacy and numeracy learning can be successfully integrated with functional and work-oriented learning programs; in fact, evaluations have shown that the integrated package is more useful and permanent than the three Rs taken alone but that it takes longer to complete (at least 2 years, or two 10-month cycles).

In other words, the more that content and methods grow out of the actual problems and needs of the learners, out of their learning cycles, their culture, and their mother tongue, the more effective is functional literacy. This is the reason that many countries in Africa and Asia are moving away from a commonly applied curriculum toward functional literacy programs designed for specific homogeneous groups. Some of the methods being used in curriculum design include modular sequencing, basic learning modules, problem-solving, spiral curriculum, use of indigenous culture. The interdisciplinary nature of functional literacy demands teamwork in planning, including teachers and potential learners, and decentralization of development and testing.

Evaluations of successful functional literacy programs have concluded that *adult-centred* teaching methods are the most effective, as are "open" learning systems, those that are flexible and capable of being modified by participants — planners, curriculum developers, teachers, and learners. Adult-oriented teaching methods include the inductive method, learning-by-doing, group-centred methods that rely on the media, and the education-as-cultural-action method (Freire).

How long it takes to learn and retain literacy skills depends primarily on the complexity of the language, the difference between the written and spoken language, and the goals of the learning program. Other variables include:

- The intensity of the course and its purpose;
- The quality of teaching;
- The cultural attitude toward literacy;
- Whether the mother tongue is the language of instruction;
- The supporting network for use of reading and writing; and
- Whether literacy is integrated with vocational training from the outset or is the first stage of an educational program.

Comparison of retention studies is difficult because differing definitions of literacy are used in each study. There are also limitations of cross-sectional versus longitudinal studies, which could be overcome only by a paired analysis over time to test results. Lacking this, most studies have compared out-of-school scores to baseline scores of school leavers or have made comparisons within groups of school leavers. Both types of studies are indicators more than they are actual measures of retention. Studies that attempt to find correlates of retention face the problem that the "independent" variables often are not independent of each other and are dependent upon the "dependent" variable.

Costs of Literacy Programs

Many factors combine to make it almost impossible to sort out the per person costs of literacy. For example:

- How to calculate a capital expense figure per class, when some of the materials purchased, such as jeeps, bicycles, blackboards, have a useful life far beyond the duration of the literacy class, or even a 5-year program;
- How to determine the "successful graduate" and calculate the costs of producing one when success, according to a project's objectives, includes having control over his/her "milieu," participating in cooperative community activity, etc.

Attempts to compare the costs from country to country are confounded further by variations in:

- The standards of living and costs of goods, which cannot be adequately compared even when reduced to a common currency (e.g., U.S. dollars);
- The degree of difficulty of the language and the students' existing knowledge; and
- The length of courses and the standards set for achievement:

> ...Test levels and criteria varied widely from subject to subject, context to context, project to project and perhaps also within projects. Arithmetic considered 'basic' in an automobile repair course might be 'advanced' in a weaving programme. Automobile repairs (or weaving) also require very different amounts of learner effort depending on previous familiarity with cars (or looms). Similarly, 'written expression' means one thing for examinees writing in their mother tongue and something quite different and much more arduous for those who have had to master both writing and a new national or foreign language (UNESCO/UNDP 1975, p. 174).

Costs are not usually dealt with in reports about literacy projects; reports that do mention them normally do not explain the method for arriving at the figures.

Although, admittedly, literacy cost accounting is at a preliminary stage, some data are available and may prove useful.

The UNESCO reports on the Experimental World Literacy Programme (EWLP) have tried to sort out the costs per pupil (Tables 2, 3, and 4). The figures, throughout the reports, have been broken down into total costs (including research) and costs minus research involved in implementation.

The longer a course is the more costly; however courses that are too short to achieve the goal of literacy are the most expensive because the

Table 2. EWLP costs per literacy participant.

Country	Cost excluding research/ enrollee (U.S.$)	Cost including research/ enrollee (U.S.$)	Cost excluding research/ enrollee writing final exam (U.S.$)	Cost including research/ enrollee writing final exam (U.S.$)	Cost/ graduate (U.S.$)
Algeria	60.00	71.00	83.27	98.63	-
Ecuador	40.12	69.83	70.38	122.55	300.
Ethiopia	37.46	54.43	63.43	92.15	312.
Guinea	112.10	208.38	186.60	345.30	-
India	-	-	-	-	-
Iran	37.33	48.75	76.26	99.60	332.
Madagascar	68.03	111.90	77.60	125.80	-
Mali	5.73	13.58	16.83	34.63	-
Sudan	51.68	86.90	161.50	271.62	269.
Syria	-	-	-	-	-
Tanzania	5.38	6.62	8.54	10.46	32.

Table 3. Functional literacy courses in EWLP countries.

Country	Achievement equal in formal school system (Grade level)	Hours/ course	Costs of functional literacy (% of costs for equal primary schooling)[a]
Algeria	4	426	14
Ecuador	4	548	72
Ethiopia	2	700	98
Guinea	-	384	-
India	-	-	-
Iran	5	450	37
Madagascar	-	324	45
Mali	2	686	11
Sudan	-	235	100+
Syria	2	480	-
Tanzania	2	270	15

[a] Algeria, Madagascar, and Mali used the criterion of cost/candidate writing final test; Ecuador, Ethiopia, and the United Republic of Tanzania used the criterion of cost/neoliterate.

Source: UNESCO/UNDP 1976, p. 176, 188, 189.

Table 4. Teachers and participants in the EWLP.

Country	Enrollees ('000s)	Enrollees writing final exam ('000s)	Graduates ('000s)	Instructors ('000s)
Algeria	53.87	38.78	-	1.58
Ecuador	17.52	9.99	4.1	0.60
Ethiopia	36.82	21.72	9.3	0.96
Guinea	1.44	-	-	0.18
India	-	-	-	-
Iran	94.37	46.24	13.9	3.85
Madagascar	4.30	3.83	-	0.07
Mali	83.22	-	-	3.72
Sudan	7.39	2.36	0.6	0.20
Syria	1.87	-	-	0.09
Tanzania	466.01	293.59	96.9	12.23

Source: UNESCO/UNDP 1976, p. 174.

money goes for naught. The length of a course will be influenced by the standard set for achievement, degree of difficulty of the language to be learned, teacher turnover, etc. According to the data collected by UNESCO in all the countries except Sudan, the cost/person of functional literacy was cheaper than the cost of primary schooling. The EWLP final report also calculated that:

> . . .the additional numbers of learners trained by the programme compared to what schools could have done at the same cost, seems to have been roundly as follows: Ethiopia, 310; Ecuador, 2,010; Madagascar, 2,360; Iran, 16,600; Mali, 44,430; Algeria, 46,320; United Republic of Tanzania, 130,700 (UNESCO/UNDP 1976, p. 189).

More data should be forthcoming from EWLP, permitting comparisons with figures from other projects.

> . . .the lowest per capita costs appear to have been achieved in projects reaching the largest audiences. Iran, Algeria, Ethiopia, Mali and the United Republic of Tanzania, the countries with comparatively low total costs, respectively reported the following numbers of candidates for the final tests: 46,239; 38,784; 21,722; 50,000 (approximate); and 293,586. Conversely, countries with relatively higher total per capita costs — Sudan, Madagascar, and Ecuador — had a rather smaller number of final candidates — 2,363; 3,826; and 9,988, respectively (UNESCO/UNDP 1976, p. 186).

However, the writers of the report warned against accepting the hypothesis that, given the experimental nature of EWLP and the rather large amounts already spent on research and development, economies of scale (the bigger the project, the lower the cost per learner) could be achieved by extending literacy work to larger audiences. They pointed out:

> . . .Research and development costs may decrease in cases where widespread application of programmes already devised during EWLP is possible . . .however, curricula and pedagogy probably require considerable revision. Moreover, preexisting programmes will have to be modified, or new programmes prepared, if extended literacy is to be functional in terms of the specific problems and aspirations of additional groups with geographical, professional and/or ethnic particularities . . . .Equally compromising for the prospects of economics of scale are trends already detected by evaluators within EWLP regarding operational costs. Although these do seem to fall off with the expansion of literacy, there appears to be little hope for a radical reduction.
>
> Finally, a mass campaign implies a commitment of the government to move towards a fully literate society requiring an infrastructure of reading materials, newspapers, libraries, reading rooms, extension materials, all of the other things necessary to support the intellectual interests of literate people. Thus a long term plan for a literate society must take into account expenditures that probably far exceed the cost of the original literacy programme in order to establish and maintain such an infrastructure (UNESCO/UNDP 1976, p. 186).

Given, then, that the costs outlined reflect accurately the costs that are necessary to run a functional literacy program, economies could be effected:

- If it were possible to instill a greater spirit of voluntariness in the teachers (teachers' salaries were one of the largest costs involved in the literacy programs);
- If it were possible to do a better job of motivating the learners for the program so that the per capita expenditures are more efficient and therefore more economical (less turnover and fewer dropouts);
- If, likewise, the class size could be maximized (but probably not exceeding 30 learners per class) and thus minimize the number of teachers and the amount of administration; and
- If materials could be developed more economically.

The EWLP report noted that:

> . . .many countries have (or are developing) various kinds of curriculum centres designed to prepare more effective teaching materials for the schools. In addition many countries have agricultural, health and other extension services. With an increasing concern for lifelong education that does not compartmentalize educational opportunity as rigidly as in the past, it would seem reasonable to consider educational materials research and development centres which would not be limited to the preparation of literacy materials or school materials or extension materials (UNESCO/UNDP 1976, p. 187).

Table 5 is a cost breakdown of the literacy programs by country in the Experimental World Literacy Programme.

The experts evaluating the Experimental World Literacy Programme in Paris in July 1975 calculated further financial data about the various country programs (Table 6). The cost per hour would be valuable for countries using the experience of the EWLP to estimate program time and then costs.

Some data on costs have been reported about other literacy programs

Table 5. Cost breakdown of literacy programs in EWLP.[a]

Country	Preparatory and research study costs (%)	Teacher salaries (%)	Service Personnel salaries (%)	Functional material[b] (%)	Teaching materials (%)	Classroom and equipment (%)
Algeria	15.5	52.0	3.6	4.5	1.4	22.3
Ecuador	42.5	40.6	1.2	7.8	5.7	1.8
Ethiopia	31.1	26.5	3.2	30.4	4.2	3.9
Guinea	46.2	20.9	.2	14.7	11.5	2.5
India	-	-	-	-	-	-
Iran	23.4	12.5	1.0	16.9	0.9	2.2
Madagascar	38.3	23.7	3.3	23.8	4.3	4.5
Mali	57.8	12.5	2.1	16.0	6.0	4.3
Sudan	40.5	30.3	3.7	16.4	4.2	4.1
Syria	58.3	-	-	-	-	-
Tanzania	18.7	35.5	1.4	38.7	2.4	2.4

[a] Remaining expenditures were for transport in implementing the programs in each country, ranging from 0.2% to 4.0%.

[b] Functional materials and personnel refer to the requirements of the programs in the various areas of "functionality": agriculture, industry, women's studies, trades, crafts, etc.

Table 6. Costs/hour and total expenditures in the EWLP.

Country	Teaching personnel/ hour(U.S. $)	Functional materials/ literacy group/hour (U.S. $)	Functional personnel/ hour/literacy class (U.S. $)	Total/ project (U.S. $ '000s)
Algeria	2.90	-	-	5797.6
Ecuador	1.52	0.30	0.046	2275.2
Ethiopia	0.79	0.79	0.08	3473.7
Guinea	0.91	0.62	0.04	986.1
India	-	-	-	4308.0
Iran	1.47	0.40	0.02	5952.2
Madagascar	5.00	2.20	0.30	924.6
Mali	-	0.12	0.02	2500.3
Sudan	4.16	1.84	0.42	1311.4
Syria	-	0.95	-	296.1
Tanzania	0.33	0.43	0.016	4197.3

(Table 7). The Brazilian Literacy Movement (MOBRAL) reported that the per capita cost for the functional literacy program was 57.62 cruzeiros (approximately U.S. $10). Although the costs for the integrated education program section of MOBRAL were reported in 1973 to be 12.21 cruzeiros (approximately U.S. $2) per pupil covered by the program, DaCosta (1975) pointed out: "total costs should include the resources of the States, Municipalities, and Communities." MOBRAL's central office reported that its community development program, per pupil, including teaching material but excluding community resources cost 6.66 cruzeiros (approximately U.S. $1). The total yearly budget (1973) of MOBRAL was approximately U.S. $42.1 million, a generous sum compared with the total cost (U.S. $32 million) of EWLP during 6 years of operation (UNESCO/UNDP 1976, p. 184).

Table 7. Illiteracy, population, income, and primary school cost for 25 countries.

	Illiteracy (% ca. 1968)	Population ('000s, mid 1973)	Income per person (U.S. $, 1973)	Costs per pupil in primary school (local currency, U.S. $)
Afghanistan	90.0	16634	90	490 afghani (1970), $9.09
Algeria	81.0	14700	570	330 dinars (1970), $66.84
Brazil	39.3	101051	760	- -
Burma	42.3	29509	80	44 kyat (1969), $9.16
China	46.1	811350	270	- -
Colombia	37.7	22500	440	281 pesos (1972), $12.76
Cuba	-	8920	540	- -
Ecuador	32.7	6786	380	603 sucres (1971), $24.12
Ethiopia	-	26550	90	76 Bir (1971), $33.04
Guinea	-	5243	110	7385 francs (1969), $32.27
India	72.2	581911	120	49 rupees (1968), $6.53
Iran	87.2	32136	870	4489 rials (1972), $58.77
Israel	15.8	3210	3010	635 pounds (1969), $181.43
Madagascar	66.5	7185	-	6064 francs (1972), $24.04
Mali	-	5370	70	15842 francs (1972), $30.00

(con't)

(Table 7 concluded)

	Illiteracy (% ca. 1968)	Population ('000s, mid 1973)	Income per person (U.S. $, 1973)	Costs per pupil in primary school (local currency, U.S. $)
Pakistan	81.2	5370	70	71 rupees (1972), $30.00
Peru	39.4	14531	620	-
Somalia	93.0	3042	80	201 shillings (1971), $28.20
Sudan	88.0	17051	130	13 pounds (1970), $37.32
Syria	70.5	6948	400	126 pounds (1971), $32.98
Tanzania	-	13974	130	176 shillings (1971), $24.65
Thailand	32.3	39400	270	445 bhat (1972), $21.27
Turkey	61.9	37930	600	-
Vietnam (Democratic Republic of)	35.5	23220	110	2762 piastre (1971)
USSR	1.5	249750	2030	-

Financial and other data from India are limited, but some idea of literacy costs is provided by an agriculturally oriented program in southern Rajasthan, which reported expenditures of 31.50 rupees (approximately U.S. $4) per participant and 72 rupees (U.S. $9) per graduate. This was an 18-month project completed in 1975. The figures did not include any research or material development costs but did include administration costs (project office and staff, supervision, transportation, etc.). There was no separate cost calculated for participants who wrote the final exam.

A literacy program within the Sudanese textile industry was reported to have "unit implementation of variable costs per participant. . .[of] $71.95 U.S. The corresponding unit cost for graduates is $221.44" (IIALM 1974, p. 103). The percentage breakdown of the budget was personnel for classroom instruction, 36.0%; value of lost production during teaching, 26.4%; personnel for supervision, 22.4%; instruction materials, 7.7%; training of instructors, 2.2%; out-of-class instruction, 0.3%; and other costs, 5.0%. Another Sudanese literacy project, which was undertaken in the oil and soap industry, had total variable-per-participant costs of U.S. $66.35, and per-graduate costs of $194.48. Of the total monies required by this project, 49.8% came from the national budget, 43.3% came from the factories involved, 6.2% came from international sources, and 0.7% came from the participants. The per-unit costs for both Sudanese projects were too high to be viable on a broad or mass base.

Additional Data

Four additional sets of data help to clarify insights on comparative costs: illiteracy rate, population, income per person, and cost of primary school education. Countries with an illiteracy of 40–50% have greater leadership available and greater support for literacy than do countries with illiteracy of 70% or more. Thus, the illiteracy rate affects the costs of a program and, combined with the population figure, indicates the magnitude of the task. The population size, in turn, affects the approach and costs. For example, a program plan in Mali for the 5 million population would be inappropriate for Pakistan with more than 66 million people.

The income-per-person indicates the relative costs of living in different countries and may be useful for troubleshooting. For example, comparing two countries with similar per-person incomes but broadly disparate program costs may uncover waste or special circumstances necessitating a greater expenditure in one country. In other words when expenditures are compared, a base figure, like the per-person income, is needed to guide interpretations. For example, in Mali,it was found that cost per enrollee was $13.58 and per final participant (taking the final examination) was about $34.63. "The annual Gross National Product of Mali was estimated, at the conclusion of the project, at $50.00 per capita. Assuming that it takes about half of that to bring an illiterate to successful completion of a literacy course, it would take nearly half a year's GNP to bring the 90 percent of the population now illiterate to a minimal level of literacy skills" (UNESCO/UNDP 1976, p. 84).

The costs per pupil in the primary school systems computed from the *UNESCO Statistical Yearbook* for 1974 indicate how costs for functional literacy programs compare with the formal school system.

Cost Statistics Not Enough

Is too much being spent on literacy work? On the contrary, some countries are spending too little and need to spend more to reap any significant results. (India is, perhaps, an example.) However some literacy projects are more costly than they need to be.

John A. Smyth, in *Cost-Effectiveness Report on the Work-Oriented Adult Literacy Pilot Project in Iran: Synopsis*, discussed the economics of mass literacy campaigns and the desirability of integrating literacy with other development activities. He pointed out:

> . . .of course, integration can be attained by restricting programmes to places of work, given on-the-job, with incentives and sanctions to encourage attendance, but that rather ignores the great mass of illiterate peasants and workers, men and women, who do not earn a living in factories or large workshops. And anyway, properly 'integrating' a project with other development activity is no assurance of greater economic benefit.
>
> From a purely economic standpoint, it is not a priori significant whether a programme is general or specific; what matters is that the rate of return on investment in it should be high enough, which may or may not depend on its degree of generality or specificity. And simply because a program is given-on-the-job, properly 'integrated' to the work situation, is

> no reason at all for supposing that it is more economically successful than a general programme given in the evening in a rural primary school to a mixed bag of peasants and children (Smyth 1972, p. 170).

Smyth's conclusion about the Iranian project is probably true for every literacy project: "Grounds for concluding that the project was an economic failure (or success) simply do not exist, and probably cannot be established empirically, anyway. The most that can be concluded is whether the project's authorities followed correct economic principles" (Smyth 1972, p. 170).

Summary

Variations in learners, teachers, costs of inputs, language difficulty, length of courses, etc., make financial comparisons and interpretations of literacy programs difficult; however the UNESCO Experimental World Literacy Programme attempted to sort out some of the costs in participating countries and found that they ranged from U.S. $5.38 per enrollee in Tanzania, through U.S. $51.68 in Sudan, to U.S. $112.10 in Guinea. The costs per graduate ranged from U.S. $32 to $332.

The duration of the courses in the EWLP directly affected the costs, and the country programs varied from 235 to 700 hours, the standards of achievement ranging from grades 2 to 5.

The data indicated that the lowest per-person costs were achieved in projects reaching the largest audiences (e.g., Iran, Algeria, Mali, Tanzania) and, conversely, the highest costs were associated with smaller numbers of candidates appearing for final tests (e.g., Sudan, Madagascar, Ecuador). However, the authors of the EWLP report warned against concluding that the bigger the project is, the lower the cost per learner. They noted that EWLP was an experiment and that rather large amounts of money had been spent on research and development (UNESCO/UNDP 1975).

However, there was room for some conclusions about how to save money in literacy programs:

- Engage volunteer teachers (teachers salaries were one of the largest costs involved in the literacy programs);
- Concentrate early on motivating learners so that turnover is low and dropouts are few;
- Maximize class size (probably not exceeding 30 learners per class); and
- Streamline methods for development of learning materials.

Grounds for concluding that a project has been an economic success or failure probably cannot be established empirically. Perhaps, the most that can be concluded is that a project's authorities did or did not follow correct economic principles, which themselves are not clearcut, being influenced by andragogy and pedagogy; value judgments (who is to be included in a program, how long the course will last, etc.); and political commitment.

Environment for Living Literacy

The report of the Tehran conference of 1965 stated that no literacy campaign should be started unless and until there has been provision for adequate, appropriate, and accessible materials for follow-up practice by neoliterates. The Expert Team on Evaluation of Experimental Literacy Projects said: "For literacy to be effective and lasting, it must be sustained by an infrastructure that not only provides literates with abundant reading matter but also maintains their taste for reading and broadens their horizons" (UNESCO/UNDP 1976).

In other words, follow-through for postliteracy does not mean merely to reinforce literacy techniques by providing reading materials but to create an environment that encourages individuals to act effectively as literates in daily life and to react critically to their understanding of reality. The Declaration of Persepolis (1976) pointed the way, stating that literacy is a fundamental human right that contributes to human liberation and full development.

In April 1977 UNESCO experts on postliteracy in Africa, stated:

> . . .By post-literacy we understand all measures taken to enable the neo-literate to put into practice the skills acquired and to increase the knowledge obtained during the previous stage. Thus he will be able to go beyond what he has learned and to use his new knowledge; and above all, by learning how to learn and how to make decisions, take an active part in the continuing process of development and mastery of his environment (UNESCO/BREDA 1977b, p. 4).

The experts decided that the prerequisites for efficient postliteracy activities were:

- Determined commitment on the part of government;
- Integration of postliteracy planning into the general activities devoted to educational planning, and to social, economic, and cultural development; and
- Creation of structures that favour the development of postliteracy activities.

At present, national, regional, and international efforts need to be intensified, dealing with literacy more realistically and soberly than in the 1960s. Literacy is a multiple task with broad objectives in social, economic, and cultural development. Equally, postliteracy is a major task, calling for a national program, commitment, effective participation, coordination and decentralization, mobilization of human and financial resources, and animation of hope and social justice among the poor and the marginal.

According to the literature available, a good postliteracy environment

fosters specific ways for new literates to participate in decisions that affect their lives; includes accessible, adequate, relevant reading materials, library services, and mass media; encourages new literates to develop their own print and nonprint materials; promotes — through visual communication such as television, film, theatre, dance arts — continued practice of literacy skills; favours the particular language(s) used in literacy programs; plans to reach beyond the economically favoured groups to include women, tribal people, nomads, people in remote areas, the poor, etc.; and provides continuing adult education programs for neoliterates.

Any country committed to creating a good postliteracy environment will probably need assistance from international and regional agencies in funding indigenous publishing and broadcasting media as well as exchange of information and documentation with other countries and regions.

At present, the literature on postliteracy emphasizes print and nonprint materials and services.

Media and Literacy

Print, nonprint, popular, and traditional media are powerful tools for literacy work, but, like other tools, they have been misused and, even, abused throughout history by the people who operate them. Media personnel often regard them as ends rather than means: educators see them as means but don't find out how or why they work; and both educators and media personnel lose sight of the audience's needs and wants. Information technologists, media producers, front-line workers, educators, policymakers, and the audience all have roles to play in media use. The first step is to define the roles so that, for example, policymakers understand communication and make full use of communicators and educators.

> . . .(Policymakers) need to finance, establish and improve their educational and communication infrastructures: training centres, extension services, and media units. They will also need to work with those who control communication policy — heads of educational institutions and services and those responsible for media systems — to coordinate communication with physical development and to synchronize information inputs with material inputs (Bowers 1977, p. 35).

Many research studies have concluded that educators and media specialists should work together to identify, test, and evaluate the roles of a particular medium; for example, a 1976 seminar on education and the media called for:

> . . . An active partnership of adult education with TV, radio and publication, both local and national, with social welfare agencies, voluntary and charitable bodies, health service, employment and training agencies and traditional formal education providers (European Bureau of Adult Education 1977, p. 1).

Despite the recommendations, however, the partnership has seldom been realized in practice. Although the media have been widely used to promote literacy campaigns, the descriptions or evaluations of their use have

Niger villagers listen to a radio broadcast; the interest is obviously there and can be captured by literacy programs.

rarely indicated what media have been used, much less whether they have been applied to certain processes of learning or how they have been integrated with direct teaching, independent learning, or group interaction.

Assessments and informed opinions do exist, but they have been written and published as contributions to the literature on the media. This dichotomy in the literature is reflected clearly whenever educators get together with media specialists. The difficulties in coordinating departments of technical services with education/communication departments and in finding personnel who are experienced and competent in the educational use of broadcasting and programing are concrete examples of the split. Although countless literacy documents have recommended a partnership between media personnel (broadcasters, producers, writers, publishers, editors) and literacy administrators and teachers, they have never spelled out how to accomplish this partnership in practical, field-tested situations.

According to the report of the Experimental World Literacy Programme, the countries involved made "fairly moderate" use of nonprint media to teach (UNESCO/UNDP 1976, p. 141), but the EWLP and other programs have not detailed how and why a particular medium was used. An assessment made 10 years ago by J.R. Kidd is still valid (Kidd no date, p. 37): there have been few systematic studies on the use of the media to promote literacy or postliteracy learning; little attempt has been made to determine the content and instructional methods that lend themselves to a particular medium or to investigate teacher training in the use of the media for particular situations.

No one yet has answered the question: What channels of communication can be combined to produce the lowest cost per person reached, the

best learning impact, flexibility, speed of distribution, simplicity of production and use? The lack of valid research means that policymakers deciding media use are swayed by the most persuasive salesperson. "Policy makers must have confidence that the most suitable and economic choice has been made between one or several audio-visual and print media, as well as other communication forms such as teacher guidance, group interaction of learner response. They must be convinced that vested interests do not underlie advocacy of a particular medium" (Cassirer 1977, p. 5).

The fact is that many multimedia systems make better sense in the laboratory than they do in actual learning situations. According to Brian Groombridge, theorists have

> . . .paid great attention to such subtleties as what part of the teaching load should be carried by what medium — this part by correspondence, this by radio (since it was abstract), this by television (because it was concrete), this by film strip (since it was a brief process to be illustrated) and so on. This analytical thoughtfulness about the teaching load was not always matched by equal interest in the learning load. The student would be confronted by a system so exquisitely integrated that he either had to take all of it or none. As a result, he frequently took none (European Bureau of Adult Education 1977, p. 10).

Quite simply, the audience — the learner — should be the focus. The media (and other teaching/learning aids) are a waste of time if they are not based on the learners' characteristics, needs, and wants. Also they are ineffective if they have not been integrated with, reinforced and completed by, other kinds of interpersonal communications and dialogue. An investigative report, *The New Media*, concluded:

> . . .the import of our evidence is that the success of a media based system depends at least as much on the learning activities organized at the receiving end as on the content that goes into the transmitting end . . . .The media help, but the face-to-face practice is the key to what happens . . .it is clear that systems built around media are not always as successful as they could be. How the system is designed, how it is used and under what conditions, determines the degree of success (Schramm, Coombs, Kahnert, and Lyle 1967, p. 89–90).

A major challenge to those concerned with educational media has been to devise ways to involve the audiences actively and to obtain feedback (Cassirer 1977). The challenge has been particularly onerous for those who organize correspondence study, distance learning, radio and TV schools, etc. because these media do not cater to the learners' need for human contact and reinforcement. Projects using broadcast media for instruction, such as the British Open University, have demonstrated the importance of human contact — for instance, in easily accessible teaching or tutoring centres. The most necessary "media" to be coordinated into a literacy strategy, it appears, are human beings, a resource that is not exactly in short supply.

A growing feeling is that literacy learning not only is, but should be, a people-intensive operation. However, no literacy studies have been found that compare the costs of a mass television system with those of a mass program for recruitment and training of literacy teachers and workers.

Although it has been shown that a country must invest in print materials, with or without television, it may be that a literacy program based primarily on people provides more direct and long-range benefits than one based on a high-investment technology like television.

Training of Personnel

Every report and every conference on the use of media for literacy and adult education has stressed the need for intensive planning for the initial and continuing training of personnel to operate equipment, build systems, write and produce material, translate productions into other languages, and teach.

Because of the significance of media training, in both developing and developed countries, a seminar on adult education and multimedia systems recommended that "an international body should be established to disseminate information and promote international cooperation in the area of training. . . ." The seminar also recommended that

- Training of tutors be carried out at area or regional levels and under the control of local organizations;
- A national organization be set up to represent all adult education organizations and to cooperate with the national media;
- Tutors be informed about the overall impact of broadcasting on people and the role of educational broadcasting as well as the strengths and weaknesses of various multimedia systems; and
- Tutors be versed in software production and in the use of hardware (European Bureau of Adult Education 1977, p. 1a)

Radio

Since the early 1950s, international aid agencies have been heavily involved in building and expanding radio broadcast facilities in Third World countries, and, today, radio is "the single most sought-after development communication medium available" (Quarmyne 1976, p. 3). Radio has been used in international development efforts to reach mass audiences and, more recently, has been used to encourage native culture through the use of local languages, traditional music, and folklore.

Richard Burke in his monograph on the use of radio in adult literacy (Burke 1976) and others have concluded that radio is one of the most useful media because of its abilities to equalize the literate and illiterate, reaching anyone who can hear; to reach large numbers of people and those in remote areas; to stimulate learner participation and provide a sense of immediacy; to excel in oral cultures where "the ear" has deep-rooted and valued tradition; and to communicate cheaply and quickly in several languages.

How a literacy program makes use of radio services depends on the aims of the program; the needs and conditions of the people for whom the broadcasts are made; the numbers of teachers or instructors and fieldworkers and the standard of their training; and the amount of money that is available. Experienced literacy practitioners maintain that the successful use of radio requires long-term preparation and planning and the integration of national and local support structures. Initial requirements include:

- Adequate reception throughout the program area;
- Cheap and available receivers, batteries, local repair, and maintenance;
- Freedom of expression for two-way communication and feedback;
- Adequate and long-term funding for program development, production, research, and evaluation;
- Assurance that people within the target area have common needs;
- An understanding of the language(s) used for broadcast;
- An audience that identifies itself with the broadcast and its purpose;
- Some organization or reception that encourages group participation, discussion, and feedback;
- Adequate numbers of organizers, teachers, fieldworkers, and group leaders to accept responsibility for use of the programs; and
- People trained in broadcast production and script writing who are familiar with the culture and the needs of the whole country and not only with the urban elite.

Radio is nearly always compared with television, which offers visual advantages that make it tempting to planners and educators alike. But television costs more in every respect, and money makes the difference.

Burke has concluded that:

> . . .Radio has some very positive characteristics to commend its use in a programme of literacy teaching but from the experience of many countries throughout the world, it is clearly *best used in combination* with other media of communication and with a strong supporting component of field workers who can engage listeners in that most important mode of communication, person to person (Burke 1976, p. 27).

Tape Recorders

One of the most useful devices for teaching-and-learning is the tape recorder, which now, in many parts of the world, is inexpensive enough for mass use. It releases radio programing from fixed-time scheduling and can be used for repeated reinforcement in group learning situations. Particularly significant is the ability of such recorders to make local broadcasting possible, to decentralize communication (and its control), and to place intercommunication in the hands of communities as participants rather than as passive receiver-audiences.

Audiotapes are used extensively for direct instruction and for supplementary learning in many literacy programs. In Jamaica, many media (including television) have been tested in teacher training, and audiotapes have proved to be one of the most effective methods because of their ability to decentralize training (Martin 1976, p. 36); however few empirical studies of this nature have been made or, at least, published and disseminated.

Organized Listening Groups

Radio usually refers to either open (or general) broadcasting and broadcasting for organized reception by specific listeners. Open broadcast-

ing may be purposefully educative and intended for specific groups (as in promotion of mass campaigns) or implicitly educative such as the Latin America *telenovela* and *radio novela*. On the whole, in open broadcasting no attempt has been made to organize listeners; the planners rely on quality programing for an entertainment appeal characteristic of mass cinema and television.

Open broadcasting has been used to promote literacy campaigns, but nearly all direct-learning (reading and writing) experience with radio has been for organized listening groups who receive supplemental print material. Research on the effectiveness of radio in educational settings has supported the use of organized groups (also called study groups, study circles, media forums) rather than open-ended listening but has indicated that the radio programs should be self-contained and be understood without the supplementary print material.

In his work on study groups and mass education in Tanzania, Grenholm stated that:

> . . .Radio is not simply a supporting media and should not be so closely linked to the printed information that it could not satisfy a learning need independently . . . .Not everyone may have the chance to join a group and be given a book. All the same vital points raised in the texts should be brought across in radio programmes (Grenholm 1975, p. 98).

One of the early models for organized-listening groups was Canadian Farm Forum, originating in the 1940s and directed to farm groups. The format was adapted to India in the 1950s and was replicated in, or influenced, several countries of Asia, Africa, and the Caribbean. Researchers investigating a similar radio forum in India found that:

- Organized listening as a method of transmitting knowledge was vastly superior to open broadcasting (placing a radio in a village in the hope that the villagers would profit by it);
- There was little difference between literates and illiterates regarding participation in discussion;
- Knowledge gains of group members were more than twice those of nongroup members;
- Working in groups tended to bring out knowledge that was latent in the villagers; and
- The radio farm forum was an important institution in village life — "a tool in making more general, patterns of democratic decision making" (Mathur and Neurath 1959 in Schramm 1967).

Everett Rodgers, researching communications usage, agreed generally: "The effects of mass media communication channels are greater when these media are coupled with interpersonal communications channels" (Rodgers 1972, p. 304). For one thing, group pressure and social expectations can stimulate attendance and participation. According to Grenholm, study groups work because there is equality among participants; no one is turned away, and there are no rigorous rules. The group has no authority-figure; the group leader receives training in conducting seminars but does not need to be literate because the key is dialogue about issues (Grenholm 1975, p. 94).

Radio and Mass Campaigns

In Africa, Tanzania's campaigns for health, food production, and literacy have had significant, practical influence. Not the least of the reasons is the initiative of researchers and institutions involved in publishing and disseminating the results. Radio has been used extensively in all campaigns for motivation and information for input to study groups and for the training of organizers. Audiocassettes have also been used.

At an international workshop on Communications for Social Development held in Tanzania by UNICEF, the participants agreed that:

- Radio remains the cheapest means of reaching large numbers of the population including the illiterate and/or isolated;
- Although centrally planned media campaigns are administratively efficient, their messages must be tailored to regional audiences or they will be rejected;
- Extensive social research is required to establish a comprehensive cultural picture of a country and to portray the picture through the media;
- The time set aside for planning a media campaign must be long enough to permit pretesting and revision of all materials;
- The broadcasts should be incremental, building on a coherent series of ideas and should be repeated either on air or through the use of tape recorders;
- Information programing should not have more than 10–12 minutes of actual talking;
- Radio campaigns have tremendous potential for mobilizing a rural population; however, they must include well-organized follow-through so that their messages are supported by the actions of the sponsor; and
- The programing should be continually evaluated and reappraised, and the results disseminated (Hurley 1976, p.79).

Radio as Dialogue

The experiences of Senegal with *Radio Rurale* for educational broadcasting on agriculture have shown how radio can intervene in rural life and produce dialogue between villagers and national leaders. The programing for *Radio Rurale* was based on letters and reports from listening village groups. Replies to the letters were made by top level national leaders, including the head of state, and were read on the air. The use of letters was viewed as an incentive for becoming literate. The rural dwellers freely expressed their concerns, which turned out to be not the lack of technical information on farming but "political" issues — badly run cooperatives and unresponsive officials. National leaders, in their broadcasts, responded to different echelons of their own service as well as to the peasants, and the dialogue provided an opportunity for national and local leaders to discuss and, thus, avoid potential conflicts.

The guidelines that came out of *Radio Rurale* pointed out the need for a team capable of producing original programs and for an interministerial commission to coordinate ideas and guarantee the validity of the programs. Furthermore, feedback must be guaranteed, primed, and encouraged, and the politicians must be committed to freedom of expression.

The Audience

> . . .The small circles of men and women gathered around the radio receiver, turning the pages of a simple textbook, discussing the issues at stake, are just like the first cycle in the water when a stone is thrown into it. They spread over the whole surface; they involve the entire country (Grenholm 1975, p.102).

At present, however, educational radio may be reaching only a minute fraction of its potential audience. Research papers by Gunter and Theroux (1977) have suggested that broadcasts for organized audiences do not appeal to mass audiences. They have drawn their conclusions from 65 development-oriented radio projects in the Third World (McAnany 1972), of which only five broadcast to nonorganized audiences. Of the organized-audience projects, only three in the study reach truly massive audiences. These are the Brazilian *Movimento de Educaçao de Base* of the early 1960s (111 006); ACPO's (Acción Popular Cultural) *Radio Sutatenza* in Colombia (167 451); and Tanzania's health campaign of 1973 (2 million). In each, circumstances favoured mass participation. In Brazil, the government had a strong commitment to rapid social change; in the case of ACPO, the large audience was the result of 25 years of hard work by a dynamic and well-funded private organization. In Tanzania, the government's commitment to rural development attracted mass audiences. Other projects appeal to limited audiences. For instance, the Radio Club of Niger, in operation for more than a decade, programs to an audience of only 1500. Sixteen other projects for which McAnany reported audience data all reach fewer than 15 000 people. Are these audiences adequate for cost-effective use of the world's major mass medium? From McAnany's work, Gunter and Theroux have concluded that the issue turns on the word "potential."

> . . .We suspect that the 'potential' audience of the organized audience strategies only reach a mass scale in settings which possess a strong and extensive organization at the grass roots. Only under such conditions can the radio educator build a widespread network of group leaders, motivators, supervisors, evaluators, and print material distributors and still have some resources left for the creation of effective radio programming (Gunter and Theroux 1977).

Radio Schools

Latin America, where networks of radio schools have been in operation since 1947, is often cited by media researchers as an example of effective broadcasting for literacy and formal education; however, the Latin American radio school experiences — and thus their application to other parts of the world — are not widely known among literacy practitioners elsewhere. The reason is that they have not been translated into languages other than English or French. In fact, only recently have reports been published on programs in the 1960s, such as that of Emisoras Culturales Canarias (ECCA), which combined radio, printed materials, and weekly meetings of local teachers and learners (White 1977a). Studies on Acción Popular Cultural (ACPO) in Colombia and on *Radio Santa Maria* in the Dominican Republic were printed in English in the mid-1970s but are not widely

available, especially to fieldworkers in developing countries. Another noteworthy project for which information has not been made widely available is located in the Philippines. Literacy education and information in the project is broadcast to the chain of 7000 islands spread over more than 400 000 miles. The Philippines' LINK network, initiated in 1974, has brought two-way communication to many human settlements.

The oldest, and perhaps most influential, use of radio for literacy and for promoting rural development is *Radio Sutatenza,* operated since 1947 by ACPO, a nongovernmental and nonprofit private organization in Colombia. Its basic literacy course is part of a "fundamental integral education" approach that includes health and sanitation, mathematics, economics and work, and spirituality (World Education 1975). Its overall program uses mass media (radio, a weekly newspaper, booklets, audiotapes for distribution), organized listening groups and campaigns, and trained leaders in local communities. To reach isolated peasants in mountain villages, ACPO has introduced a mobile bus that enables radio, slide projector, and other learning materials to be used in the field.

A variation of the original ACPO model, which has been promising, is *Radio Santa Maria* (RSM) in the Dominican Republic (White 1977b). It began in 1964 and, until 1970, followed the literacy teaching model of ACPO. A reevaluation in 1970 found a widespread desire among young adults for more advanced formal education. The result was a 23-week course to provide, in 4 years, the accredited equivalent of 6 years or more of primary schooling. The course includes printed lesson sheets and 1 hour daily broadcasts. A field teacher corrects papers, gives individual help, and meets weekly with a group of learners. Supplemental general, cultural, and educational radio programs are broadcast regularly, and the local community organizations are enlisted for support. The total 520 field teachers and 6 field supervisors deal with the central office through weekly and monthly reports. Students pay a small fee (U.S. $0.25) to the teacher for each set of work schemes, and the fee, according to the organizers, eliminates the paternalistic aspects of some educational programs and helps defray overall costs. Teachers are not purely volunteers, as they retain U.S. $0.13 per student for carrying out the administrative duties of enrollment, testing, and fee collection. The program is introduced and supervised through nongovernmental voluntary organizations, such as youth clubs, Catholic Church parishes, cooperatives, and the local public school. Evaluation has shown that the students completing the *Radio Santa Maria* program are at least academically equal, and in some cases superior, to students in formal schools.

An example of radio controlled largely by the learner using audiotape recorders is *Radio Mensaje*, an outgrowth of a local radio school headquartered in the Andean town of Tabacundo, Ecuador (Hoxeng 1975). Since the fall of 1972, with a small initial grant from the University of Massachusetts, Padre Barriga has used cassette tape recorders to make the radio programing participatory. Unpaid professionals from the local community act as teaching assistants in the radio centres and record material from the people. The cassettes are edited for a half-hour program called *Mensaje Campesino* (The Farmer's Message) and broadcast at different times three times a week. *Radio Mensaje* discarded the approach of the programs and recordings as a vehicle for programed instruction in favour of having the recorders used by the people for self-expression and communication.

Henry Ingle reviewed literally hundreds of educational projects using media of different kinds in nonformal education projects for the Clearinghouse on Development Communications (Ingle 1974). His findings were corroborated by studies of Dodds (1972), McAnany (1973), and Rodgers (1972). Ingle concluded:

> . . . If there is one medium better suited for nonformal education than others, it is radio because of its wide coverage, relatively low cost per unit and its ability to reach beyond literates and electrical mains. Even radio is almost never used effectively alone. It needs to be combined in a teaching-learning situation with some personal contact, some opportunity for response and interaction and usually some visual features such as printed texts, posters, or newspapers. Thus a combination of media and related interpersonal communication is more effective than any one medium alone (Ingle 1974, p. 39).

Television

Despite the large capital outlays required, television has grown so rapidly that there are some 32 separate TV services operating in Africa, 118 in Asia, and 75 in Latin America. Most of these services have been established with external aid, and many have had UNESCO involvement (Quarmyne 1976, p. 4). International aid agencies have seen television as a way to stimulate educational change and have invested in projects for teacher training and for classroom curriculum reform based on TV. Heavily funded educational television programs were instituted in the 1960s in such diverse countries as Niger, Samoa, Colombia, El Salvador, Senegal, and Ivory Coast. However, the enthusiasm for educational television (ETV) services as a direct teaching tool ("the talking face") has waned in the Third World, and many countries have abandoned or restricted ETV in favour of lower cost media systems such as radio, film, and print. Tanzania deliberately decided not to invest in a television network.

The decisions to limit ETV have been based on experience. Getting the hardware, production, and transmission services in operation was a one-shot activity for which funding aid was available. But international agencies were less willing to invest in the necessary facilities and training for ongoing, indigenous program production. More than hardware was needed.

The funds were not sufficient to produce television programs based on folk and traditional culture, which is by definition a mass medium of the people and is particularly suitable for broadcast media. J.D. Mathur, former director-general of All-India Radio, stated that much of the best material for broadcasting can be found in the popular arts of village dance, puppet theatre, drama, traditional myths, and festivals (Mathur 1968, p. 46). In this sense, programing for television can enhance rather than displace indigenous culture and open new avenues for artistic expression.

> . . . The real problem with the sustenance of a television service in most developing countries is the inadequacy of access by the general public to reception facilities and the inability of television programming relevant to local situations . . . .The result is that in spite of all the many experiments in group viewing, television still remains essentially a medium for the entertainment of the elite (Quarmyne 1976, p. 5).

Long-Term Investment

Whether television has been introduced for entertainment and information or for direct instruction, it has meant long-term and costly investment not only in equipment but in the training (usually abroad) of people. Both investments have placed developing countries in a dependency position, culturally as well as financially.

But the visual immediacy of television, its ability to reach and move a mass audience, and its capability of dramatizing learning-by-doing, ideas, and events make it attractive as a means to penetrate illiteracy faster and more flexibly than the printed word. However, the equation that mass literacy equals mass media is not as simple nor as accurate as it may sound. A mass problem does not always require a mass solution; it may require solutions that are regional, selective, culturally valid, and multilingual. To translate such solutions into television coverage requires a multichannel, decentralized transmission system, and extensive program production facilities.

Mass media expert Henry Cassirer (1974, p. 54, 60) noted that the enormous scale of illiteracy cries out for literacy instruction using modern technology but that relatively little headway is being made. The reason is that the scope and objectives of mass media do not correspond to those in functional literacy instruction. Mass media are economic only when applied on a massive scale. Functional literacy teaching frequently requires specific content. The UNESCO survey of 1969 stated that:

> ... Generally speaking, where broadcasting carries the main teaching burden (and this is mainly true of projects using television), these came closer to the extensive campaign approach, even though the majority claimed to be, to some extent, functional (UNESCO 1979, p.18).

The costs of producing are high, but the possibilities are endless, beginning in the national cultures. The challenge, according to most media experts, is not just producing an adequate volume of programs but tailoring them to development needs. According to Alex Quarmyne, UNESCO regional communication adviser for Africa, the task could be undertaken by a group of countries, who exchange programs, share program production, and encourage television stations to produce programs for their own use.

Television has steadily advanced in technology, and the cost of equipment for videotape and film production has fallen dramatically. Newer hardware is easier to operate, and new media tools, such as the portable battery-operated video camera and playback unit, have moved television programing out of the studio and into real life.

In the 1960s, formal school systems used prepackaged television programs that had been made in the Western countries. The suitability of the programing was not considered, because the audience was captive. In future, however, to appeal to a mass audience, the programing should cater to the viewers' needs and aspirations and should further their education and entertain them, incorporating drama, songs, and skits.

In a pilot project in Dakar, Senegal, the use of television was planned but never materialized because of the difficulties in balancing a number of functional elements in the programing. According to Cassirer:

> ...literacy is a major task in its own right for any project; it is difficult

to make it only one of several objectives in the educational use of audiovisual media . . . .A functional literacy program in a large city with rural surroundings could not hope to reach a large enough audience to justify the use of such an expensive mass medium as television.

However, a more broadly conceived functional approach was found to be feasible because there does exist a wide common denominator in certain fields: industrial safety and other conditions of work; personnel relations in an industrial setting; urban traffic; civic issues; health and welfare; as well as a common basic vocabulary related to industrial processes and urban living (Cassirer 1974, p. 30–31).

Film and Videotape

On the whole, literacy reports have not detailed the content or use of film, although they have indicated that documentaries are used in many country studies for precampaign motivation, as supplemental information, and in training for literacy workers. Films have proved especially valuable for technical and scientific subjects in occupational–functional literacy campaigns, and a country's capability to produce them determines whether or not they are used, although the availability of projection equipment is also important.

In future, simple film projectors will be powered by 12-volt batteries, and videotape recorders will be more common. The latter have been used successfully during training sessions for role-playing and for analyzing mock group situations. "The small-scale experiments that have been carried out in Tanzania and elsewhere have shown the great benefits of the rapid feedback that videotape provides," commented Grenholm (1975, p. 37), and Martin (1976, p. 24) said that the Jamaican experiments showed that microteaching improved instructional skills and did much to change attitudes. For example, the teachers had to rethink their approach when they saw themselves "talking down" to their students.

Complementary Use of Media

Television and other mass media such as the cinema and radio are strong motivators and sources of ideas and activities. In this sense, the media provide part of the systematic infrastructure and environment that has been called for in many research studies. This infrastructure serves, and underpins, all stages of literacy programs from precampaign through to postliteracy consolidation. It also is tailored to functional literacy: the ideas and context of technical language; manual skills; agricultural techniques; experiments; and demonstrations. J.R. Kidd summed it up:

> . . .It is probable that the cinema, radio, videotape recorders and television may have a supplementary rather than a primary role in literacy and will most frequently be employed in bringing fresh information to the learner, helping him value what he is learning, helping him learn about the successes of others, helping him understand what his new knowledge can do for him.
>
> While this is a complementary role, it is extremely significant. All throughout stage one and stage two, cinema, radio and television can be

bringing to the students stories, heroic myths, history, news information about social and political developments. This material will reinforce what they are learning in class, will provide additional examples of uses of the language to supplement the more restricted language used in the classes. The same programs can help encourage and support the teacher (Kidd no date, p. 32).

Lessons from Two Countries

Jamaica has pioneered the use of radio and television for literacy learning; it began experimenting in 1966 and broadcast instructional programs on radio and television for the next 5 years. In early 1973 the national literacy program (now JAMAL) was reorganized to make more systematic use of media, along with face-to-face learning, as an aid for instruction and teacher training. The country received assistance from UNDP through a UNDP/UNESCO project from early 1973 to early 1976, and the resulting project has contributed much to planning, preparation, and production of teacher training and instructional programs (Martin 1976, p. 3). About 42% of the project's budget was used to purchase film and electronic equipment, which has outlived the project and has enabled the country to continue its work.

Jamaica's use of diversified media was possible because many low-income families throughout the country owned television sets. Radio listening was also widespread in such an oral culture. The project report indicated the problems (mainly organizational) in integrating media with a national literacy program, especially in the early stages of the operation:

- Insufficient preplanning to allow for delays in arrival of equipment and in working out a clear organizational structure and staffing it;
- Lack of qualified audiovisual staff;
- Difficulties in organizing an educational media unit that would consolidate the departments of communications and of technical services;
- Difficulties in establishing working relationships between the National Literacy Programme and Jamaica Broadcasting Corporation; and
- Difficulties in coordinating radio with television.

Cassettes, and particularly audiocassettes, proved most valuable because they could be replayed and disseminated to teacher training centres for continual use. The lack of training of many teachers, most of whom were volunteers, led to the use of microteaching. This is believed to be the first time the technique had been used in literacy training.

Jamaica sent teams of administrators and literacy personnel to observe and learn from the experiences of MOBRAL (Brazil) and of Cuba and found that the contacts and on-site visits were of significant help in forming policy. Similarly, Jamaica's experiences in media and literacy teaching would be valuable to other countries.

The U.K. Campaign

A 3-year adult literacy project was launched by the British Broadcasting Corporation in 1975 incorporating the findings from more than a year's

Among other promotional measures, the participants in the U.K. campaign donned t-shirts illustrating their aim.

research and pretesting. It was the first attempt in an industrialized society to use open broadcasting on a massive scale to discover the extent of illiteracy and to contribute to its alleviation (Stevens 1977). The project team did not believe that television or radio could ever, on its own, achieve more than a modest increase in reading skills. The television series (stage one and stage two) was intended to give adults confidence in their ability to learn, to illustrate the connection between the spoken and written words, and to encourage them to seek help by telephoning the BBC for referral or joining literacy schemes. Radio programs and their audiotapes were used to train volunteers and to help adults with reading comprehension. Print materials were developed to supplement tutors and illiterates, and the mass media throughout the country have publicized and supported the campaign.

The BBC campaign created the need for more literacy classes and resulted in a 3-year national adult literacy campaign mobilized and coordinated by the Agency for Adult Education Resources, the National Committee for Adult Literacy, and the BBC. The government contributed £1 million for 1 year (later extended) to support local education authorities and voluntary agencies. The campaign involved trade unions, business, industry, libraries,

adult education, and voluntary agencies, recruiting thousands of "unqualified" volunteer tutors (Department of Education and Science 1976).

The campaign differed from many national efforts in that it was not initiated by government. Government supplied grants to the local education authorities and voluntary organizations as a response to documentation, pressure, and publicity. The British Association of Settlements (1974) drew national attention to the fact that more than 1 million or more adults in the country were grossly handicapped by poor reading skills.

Although mostly inherent in a stable, democratic society, the principles that underlie successful literacy campaigns were displayed by the U.K. campaign. These included national action response; voluntary participation; coordination of a range of organizations and institutions; decentralized organizational structures; good communication and broadcast systems; precampaign publicity by all media; pretesting of materials; involvement of public and private sectors; initiative by voluntary and adult education agencies; organized and accessible centres for classes; recruitment and training of volunteer tutors; attention to follow-through; and participatory research.

The United Kingdom campaign for literacy and the experience of other countries have provided a basis for evaluating the media. In fact, the National Institute of Adult Education (England and Wales) has undertaken a 3-year research project with the following terms:

- To assess the role of broadcasting in gaining the attention, overcoming the inhibitions, and stimulating and sustaining the efforts of illiterate adults and their tutors;
- To investigate the combinations of elements in the range of motivation and instructional media (including those associated with broadcasting) that are found appropriate to different types of learner and teacher; and
- To investigate the correlation between the different types of learning situation and subsequent social benefit of increased literacy in family, jobs, leisure, and other relationships and life styles (Jones 1977, p. 29).

Print Media

Literacy personnel have reported adaptations and use of practical, and sometimes ingenious, learning materials, including slides, films, audiocassettes, calendars, posters, charts, primers, and workbooks. The effectiveness of the methods, improvisations, and innovations cannot be gauged by general research methods; it needs to be measured by participatory research, a means to elicit the experiences of teachers and learners.

Although print is the medium with which literacy programs have had the most experience, even it has not been researched extensively. There has been little research into the forms, the presentations, or the type face that are favoured by nonreaders and new readers. Designing materials that mirror the way nonreaders perceive the world is difficult, and any materials that are to be used in literacy programs should be developed and tested with illiterates. In the past, literates have prepared the materials assuming that nonreaders follow certain visual sequences and that illustrations and symbols have

common meanings; the results of this cultural gap have been evident in many literacy programs in developing and developed countries.

In the United Kingdom, the adult literacy campaign found that its illustrations and graphics did not immediately imply key words to illiterates and that planned sequences did not work because nonreaders look randomly at a page instead of starting at the top left (Stevens 1977).

The Experimental World Literacy Programme reported that audiovisual aids pose cultural problems rather than technical ones and that the simplest and most widespread media — posters, drawings, and other graphics — are the worst. "Despite studies carried out, graphic designers tended to act as though illiterates had either no symbolic world of their own, or one so poor as to place them at the level of retardates" (UNESCO/UNDP 1976, p. 142). Most of the graphics had been designed by literates from an urban, Western milieu. This finding underscores the fact that illiterates have a symbolic world and program organizers must attempt to enter and understand it. The EWLP report concluded: "Western-style graphics are not necessarily appropriate for Third World illiterates whose own aesthetic world should be taken into account in the preparation of graphics and other materials — the more so since these worlds may offer unique and original cultural contributions" (UNESCO/UNDP 1976, p. 132).

The Patience of Print

The book is one of the most efficient technological instruments ever devised, and it is the technology that makes democracy a working possibility. Media scholar Northrop Frye explained this point:

> . . .Print has a unique power of staying around to be read again, presenting, with unparalleled patience, the same works again however often it is consulted. It is therefore public access to printed and written documents that is the primary safeguard of an open society (Frye 1977, p. 64).

In describing the Tanzanian experience with radio, Grenholm also applauded the longevity of print: "the printed word has the outstanding quality of performance. It will still be there when the half hour or 15 minutes of radio broadcast has passed." And on posters, the printed word has the added advantage of being highly visible (Grenholm 1975, p. 98).

Unfortunately, to many literacy personnel, the printed word has simply meant lengthy primers. To a few, it has meant an opportunity to be innovative. In Thailand, for instance, looseleaf lesson cards have been used effectively and have been adopted in such countries as India. They are flexible and can be cheaply substituted, resequenced, and adjusted to local interests and conditions (Srinivasan 1976, p. 2). In Mali, a small hardbound booklet was used as a farming logbook on crop yields and sales. The farmers took the literacy course to learn how to use the log, a practical application of their literacy skills (Dumont 1973, p. 10).

Folk Culture

Recently, interest has increased among development planners, exten-

The Chanchari dance is being performed by the Lok Kalakar Institute of Popular Art in India. Activities such as this represent a wealth of content for media programs.

sion workers, communications experts, and artists in the use of traditional communication channels, such as folk media and indigenous cultural institutions. These channels use the local idiom, are participatory, and people-based; they are a viable means of introducing new literates to the printed word, whereas, according to the critical assessment of EWLP, the models of mass communication from developed countries are not:

> . . .Efforts are needed to create alternative means of popular mass dialogue in keeping with already existing communications, traditions, and with national needs and aspirations. This is one challenge that EWLP helped to define, if seldom to answer (UNESCO/UNDP 1976, p. 141).

Popular theatre has been used in adult education programs in a variety of social settings throughout the world from Mexico to China. Simply staged, portable productions have primarily been aimed at introducing local audiences to political, social, and economic issues and at maintaining dramatic and artistic skills of traditional and popular artistry.

In a study of popular drama via the mass media, Gerace and Carkin (1976) concluded that indigenous drama, puppet theatre, dance, traditional myths, and festivals can be adapted effectively to the open stage, radio, television, and/or film but that the process demands careful planning. The mass media reinforce exposure to the dramatized issues and may even generate revenue if distributed nationally or to countries with similar cultural forms and development concerns.

> . . .Ideally, a system utilizing dramatic art for developmental purposes needs, from the outset, to sponsor collaboration between artists, national planners, and educators . . .to research development concerns and arrive at objectives . . . .As more productions are aired to stimulate awareness of problems, more formal educational services can support and utilize the increased awareness and motivation of the population in a way which supplies learners with specific instruction and/or materials that help to alleviate the problem (Gerace and Carkin 1976).

At a 1974 UNESCO interregional seminar on integrating folk media with mass media in family planning, K.B. Mathur of UNESCO emphasized the dearth of research and evaluation studies. For example, no one has evaluated the effect of introducing folk media into radio broadcasting, although, according to Mathur, a combination of folk media, radio, and extension work would probably be very effective: "Further government inputs in developing and using folk media would be well worth the effort. Such inputs would encourage cultural revival, and greater benefits would be obtained in the view of the relatively low costs involved in utilizing the folk media" (Academy for Educational Development 1975, p. 3).

Researchers studying folk culture as a medium for development (Colletta 1975; Kidd and Byram 1977) have found that theatre has captured the interest of development personnel but that other indigenous institutions and practices have been virtually ignored. Most cultures include indigenous ways of arriving at consensus; traditional political, economic, religious, and social forms; networks of production, distribution, and consumption such as marketplaces and shops; and clubs, sporting events, games etc., all of which are channels of communication. How they can serve the development process needs to be determined through, according to Colletta, research into the social psychology of rural peoples and the possibilities and consequences of combining modern and traditional means of communicating (Colletta 1975, p. 11). For instance, research could determine what has been the impact of a folk song created by Indian playwright Habib Tanvir to explain rain or a videotape program demonstrating how the *natuanki* (song and dance form) of North India could be used to teach the alphabet to young children (Academy for Educational Development 1975, p. 14).

The folk media are a means to introduce the printed word to illiterates, and they are a source for printed materials, meeting one of the most important needs of literacy programs — interesting, engaging reading material. They are familiar to the learners and provide possibilities for continued involvement and practice in literacy. Although there are few books or newspapers accessible to the average villager in Africa, Latin America, or Asia, the learners can generate their own print materials, relying on their knowledge of folk media and cultural heritage that are in danger of vanishing. In many countries as diverse as the native people of northern Canada and the elders of tribes in Tanzania, work is going on to record and transcribe indigenous stories, legends, songs, and events.

One program of "books by the people" has been launched in Tanzania by Simoni Malya of the Adult Education Institute (Malya 1975, p. 112). Tribal elders with reputations as storytellers are invited to tape-record their stories, which are then translated in the national language of Kiswahili and printed in simple form. These published materials have been successful because, according to Malya, the stories are brief, they contain humour, they open up

stories of other tribes and dialects to everyone, and they instill and draw on pride in reading about one's own country.

> . . .Such materials contain the type of education that our forefathers practiced. These are learning and teaching situations which, if we are prepared to study, we may even find from them ways of serving adults better. By collecting and printing these materials, we are, in fact, perpetuating adult education as it was known by our fore runners but not recorded and formalised. Perhaps this is an area where research should be done to find out how traditional education can be used to help an adult educator today be more effective (Malya 1975, p. 121).

One way to involve people in producing their own reading materials is to hold competitions and festivals for new writers, and seminars, workshops, and study sessions for new and would-be authors. The results — easy-to-read and relevant stories — are especially crucial to areas where the learners' mother tongue is not the official language or where the national language has only recently been transcribed. There is little value in teaching adults to read languages for which no reading materials exist because the literacy skills will rapidly deteriorate without use. Reporting on the Mali experience, Dumont (1973, p. 63) suggested two alternatives: a second-stage literacy program for a second (or official) language that offers plentiful materials (such as French); or a massive program to produce books, newspapers, radio programs, and magazines. The first alternative means either creating a bilingual population or going through a transitional phase. An example is in Mali, where French (the official language) will be based on the four major mother tongues.

The second alternative means revitalizing the cultural resources of national languages.

The Rural Press

Whether the first or second alternative is chosen, national printing houses generally do not have sufficient equipment to produce publications that are relevant, accessible, and appealing to new literates; a viable alternative is the rural press. For example, in 1965, Niger started mimeograph bulletins for areas where literacy programs were under way. Since then, rural presses have sprung up all over Africa. The results have demonstrated that the rural press is more than a source of reading materials for new literates, it is a link with national politics and plans as well as local activities and production (Schreyer 1976).

The movement for rural press in Africa did not originate with metropolitan newspapers who saw no market in areas where most people are illiterate. It originated in various ministries under the direction of civil servants. As of 1976 there were rural newspapers operating in 11 African countries. Although a survey (Schreyer 1976) showed there is no communications formula, rural press specialists have developed the following guidelines:

- Establish the newspaper in a rural central area and use local people as communicators to organize reading groups or reading clubs;
- Stimulate dialogue and encourage readers to write to the paper;

- Give priority to readers' mail; publish their letters and comments; give space to in-depth reports on the villages; and
- Study, evaluate, and experiment with various means of dissemination based on such traditional activities as fairs, festivals, and local markets.

An essential step is to ensure that the newspaper is financially able to be published a long time. Most newspapers try to recover costs through sales, and the rationale for doing so is sound. Even though the purchasing power of the audience is limited, the contribution makes the readers feel that they are part of the operation and that they are treated as responsible adults.

An example of an effective rural newspaper is *Kibaru*, which Mali created in 1972 with the help of UNESCO. To assure dissemination and feedback, the organizers encouraged a network of village communicators, who were chosen from among community development workers, primary schoolteachers, and adult educators. The communicators have been, in effect, the local representatives of the newspaper; they assure its circulation, organize meetings for group reading, help editors to adopt reading matter to their areas.

An operation similar to the rural press may be useful to people in the urban fringe who are not adequately served by metropolitan papers. At present, Tanzania is unique in devoting one page of a major national daily to news for new literates that is printed with suitable vocabulary.

Distribution

Distribution is the most difficult operation in providing reading materials to people. The complete sequence of printing, storage of materials, and their regional and then local distribution should be surveyed and planned well in advance and put under the direction of a managerial team.

According to research reports, at least 1 year before a program or campaign begins, a country-wide survey should be made of all printing establishments, storage depots, and transport conditions so that shortcomings in equipment, supplies, outlets, etc. can be identified and remedied early. Although the main printing houses are usually in the capital cities, regional resources such as adult education extension workers need to be cultivated and coordinated well in advance of a program. The Tanzanian experience has shown that competent extension officers and a strong regional and local organizational structure (the political party) can overcome most difficulties (Grenholm 1975, p. 47).

In Pakistan, the Adult Basic Education Society relies on teachers to distribute primers (sold to students for cash) and follow-up materials. The teachers receive a 10% discount on sales. This practice has created a permanent distribution network as well as links between teachers, who are local residents, and supervisors (David 1972).

Libraries and Publishing Houses

According to the critical assessment of the Experimental World Literacy Programme:

> . . .Planning for the provision of appropriate popular reading materials is required concurrently with the organization of adult education services of whatever kind (UNESCO/UNDP 1976, p. 140).

The creation of facilities for the production and distribution of materials "may be tantamount to setting up the material infrastructure of a literate society," concluded the report.

One essential component of a system for the distribution of reading materials is a public library, and another is a statutory National Book Development Council of publishers, booksellers, librarians, and representatives of government departments and allied organizations. These exist in India, Malaysia, Singapore, Philippines and are planned in Sri Lanka, Pakistan, Ghana, Kenya, Nigeria, and Tanzania.

Publication of books and other reading materials is not the responsibility of libraries alone. The work involves all those who are concerned with adult literacy, that is, planners and teachers, authors, printers, and publishers (Kaungamo 1975, p. 131). Possibly because postliteracy development is not the immediate objective of postliteracy programs, many evaluations and descriptive reports have not dealt specifically with the role of libraries or of a publishing industry. Like information related to the use of nonprint media, the data on libraries seem to exist in separate documents that may not come to the attention of those responsible for literacy programs. Perhaps, the International Federation of Library Associations and its regional affiliates could ensure that library services are an indispensable part of a literacy campaign.

Literacy researchers have assumed that a library is required in every city, village, district, etc. where classes are held. In the Soviet Union's campaigns, every factory floor had its library or reading room, and in India, village reading centres were opened by voluntary organizations and staffed with help from new literates. In Kerala state in India, a voluntary organization, Grandhasala Sangham, has established 4000 village libraries, more than 200 of which offer literacy classes. This movement, which has been supported by community contributions, was awarded honorable mention for the 1975 Krupskaya Literacy Prize.

Libraries in cities have a special role in being centres for reading clubs, discussion groups, film shows, and flash card demonstrations. They are one means for rural migrants and others to learn how to live in an urban community (Maitra 1974, p. 75).

In Tanzania, the Library Service Board, enacted in 1963, has responsibility for equipping, managing, and promoting libraries. The National Central Library opened in 1967 is the "hub of the wheel from which spokes [village and mobile libraries] . . .reach out to towns and villages." The outreach program has given a new dimension to librarian training: not only how to provide readers with suitable and adequate books but also how to convince them that they should read.

Information Sharing

Practice in producing, distributing, and encouraging postliteracy materials in some countries is ahead of what is known and undertaken in others,

and organizers and practitioners could learn much from colleagues in other countries and regions.

Much national, regional, and international theory and praxis is not easily available to practitioners. Despite the exemplary work of UNESCO and of such bodies as the International Institute for Adult Literacy Methods, documentation and information exchange (and its accessibility) are inadequate; information tends to be exchanged (and stored) in the upper echelon and rarely finds its way into a professional support system for the fieldworker. An essential requirement for expanded information-and-learning services is international and regional action for translation of documents and studies from, and into, national and international languages. The information to be exchanged need not be in print: countries and regions can share both practice and theory through, for example, realistic documentary films or videotapes. Or through people in personalized sharing, such as an inter-country visit, which departs from mere statistical analyses. An example of such sharing is the experience of the Jamaican National Literacy Programme during which staff teams visited MOBRAL, the Brazilian literacy movement, and Cuba. The Jamaican program was strongly influenced by MOBRAL, despite differences in country size, population, and language, and both visits reinforced the Jamaican plan for a coordinated adult education policy and agency. Commenting on the MOBRAL visit, the project director stated: "This visit to one of the most successful and largest literacy campaigns ever undertaken had deep and positive effects . . . .This kind of information tour should be recommended to other literacy programs at the inception of a national campaign" (Martin 1976, p. 8).

J.R. Kidd summed it up from an international study of education for development:

> . . .Everywhere one goes, one finds examples of action that is less successful than it could be, and programs that would be substantially improved if the practitioners knew what others had learned . . . .Besides, the sharing of information, particularly between people who are committed to action, is one of the strongest means of motivation (Kidd 1974, p. 112).

Summary

A learning environment ensures lasting literacy, providing literates with opportunities to use their skills to master their environment. Creating a learning environment requires efforts equal to — if not greater than — those needed for first-stage literacy programs. Essential to it are services to produce and distribute print and nonprint media. These services should be committed to literacy programs and should be part of a national communication system that allows freedom of expression and two-way exchange. They should include an indigenous publishing and production industry for print and visuals, broadcasting, mobile and fixed library services, traditional culture, and folk media.

Although such services have been shown to contribute to literacy campaigns, their specific uses have not been detailed in the literature. The only points that emerge from the available literature are that a variety of

media should be used and should be combined with personal contact. In future, the use of media should be planned so that the assets, shortcomings, and cost of each medium can be identified and evaluated and the findings shared as widely as possible.

Radio has been the most successful broadcast medium used for literacy, and its impact is greatest when its use is integrated with print and visuals and backed by study groups, tutors, and feedback to programmers. It can be effectively extended by audiotape recorders, which provide flexibility of transmission and permit the learners to make their own radio programs. One example of successful radio programing is in Latin America where radio schools offer programs in literacy and basic education. To date, radio broadcasting in literacy programs has been primarily aimed at organized audiences and has been supported by teachers and facilitators, although general, open broadcasting has also been used to promote literacy campaigns.

Compared with radio, television has been used with less success as an instructional tool. Because of its high costs, TV remains essentially an entertainment medium for the elite. Although it has been introduced in some countries through financial aid from international agencies, it demands so much continued funding — for software, programing — that most countries either have abandoned its use for education or have relied on foreign-produced programs, broadcasting to the formal school system.

To be useful, TV must reflect the culture where it is viewed and it must be available to the masses.

The least expensive and most widely used medium is print (primers, posters, books), and virtually every literacy program is based on it. This fact makes it all the more surprising that little research has gone into determining the most appropriate layout, presentation, typeface, and graphics for non-readers and neoliterates. Most designers are not even aware of the research that has been done on the symbolic world of nonreaders, which differs significantly from that of literates.

Adequate, suitable reading materials for new literates are always in short supply but are especially hard come by if the language of instruction has only recently been transcribed. One source of materials is traditional legends and stories, which can be recorded and printed and which may provide insights into the learning patterns of the people. Another source is the library, a facility that should be established in every village, urban district, factory, and/or enterprise where literacy courses are taught.


Part 2

Guidelines

The following observations and conclusions are intended as guidelines for those who make decisions about educational policies. No claim is made that all or most of the conclusions are founded on careful research. They have been based on agreements arrived at in regional and international meetings; on experiences; and on experimental research findings. They all conform to a simple criterion: it is probable that others looking systematically at the same data would reach the same conclusions.

Some of the observations are self-evident, almost clichés, but they have been included because they are not always, or often, found in practice. Some represent a growing consensus of intent, "shoulds" and "lessons learned" for present and future application. Here and there we draw inferences or outline interesting possibilities without deep support; we have indicated where this has been done.

We are concerned about application and, therefore, have organized these guidelines for particular educational services. Not surprisingly, the main comments are directed to those who are concerned with literacy itself. Many of the guidelines have implications for all or most education and thus are repeated, or touched on as reminders, under several of the headings.

Applications for Agencies and Programs of Adult Literacy

- There is almost no evidence to justify the belief or policy that a country can become substantially literate mainly or solely through primary schooling. Only one country in this century, Japan, has succeeded by virtue of such a policy. The conditions were exceptional, and the process took more than 50 years. We believe that countries following such a policy should review and reorganize their priorities.
- However, plans for primary schooling should be coordinated and linked with plans for adult education, as the achievement of full literacy and graduation from the primary school are roughly comparable.
- Literacy should not be defined in terms of what an adult cannot do nor should it be defined by some comparison with the schooling of children; it can and should be defined as the competence that is necessary for an adult to participate effectively in his or her society. This competence may be established as the minimum standard or quality of education to which all adults are entitled.
- Adult literacy is an essential step in economic, social, and political development; it should not be forced to compete for scarce development funds, because it is part of development and is believed by many to be the right of every citizen.
- Countries can achieve comparatively full adult literacy, providing they

have national commitment, effective participation, a coordinated literacy program, and mobilization of adequate personnel and other resources. Although there have been many examples of failure, the conditions of success are known; a country must be prepared to support literacy wholeheartedly and to provide further education of new literates.

- With suitable motivation and instruction, the majority of adults can attain full literacy in a relatively short time (up to 1 year) and at a cost very much lower than the per capita cost of primary education.
- There seems to be a critical stage in a national literacy program that can be likened to a critical mass; when the numbers of literates reach 60–70% of adults, there seems to be an inertia that pulls the rest of the population toward literacy. Although literacy programs are still needed to give new literates continuing education and to reach pockets of illiterates, the task is easier because there is a "literate" climate and infrastructure.
- Every country can estimate the cost (personnel, support services, organizational structures, educational infrastructures, etc.) and the time required to reach the critical mass; however, in the past many countries have devoted insufficient resources to literacy or have established unrealistic timetables and have lost confidence in their ability to eradicate illiteracy.
- Some countries have already achieved a critical mass of literates and are interested in the most effective ways to provide continuing education for new literates and to reach the remaining illiterates.
- Special publics or groups that are typically last to be reached by literacy programs include women and girls, tribal peoples, those in remote areas, and people in urban areas with inadequate education and low self-concept. Special plans may be needed to reach them and give them confidence in their ability and support for their activities.
- Just as there are special publics to be reached, there are special publics that can assist in a major literacy program. For example, in Arab countries members of unions have achieved remarkable successes in programs for illiterates.
- As a matter of fact, success in teaching illiterates has been achieved by a wide range of people. With adequate training and support, students, workers, homemakers, concerned citizens, and parents have become effective organizers, teachers, or aides in literacy programs.
- There are no instant solutions to illiteracy, and any technological claims to the contrary are false. Previously, some people felt that television could eliminate illiteracy, but in practice, television has been used with less success than radio as an instructional tool. It is a high-cost investment in equipment, facilities, and trained personnel and must be widespread to be used effectively for motivating, informing, and reinforcing people in literacy programs. Although international aid agencies have funded television installation in some countries, they have not been willing to finance continued indigenous programing. Thus, TV has become essentially an entertainment medium for the elite, dependent on industrialized nations to produce programs. Even when valid, indigenous, or regional programing is available, TV alone does not achieve literacy.
- The media, including TV, need to be integrated with face-to-face learning situations, and their use should be planned so that the assets, shortcomings, and costs of each medium can be identified and evaluated for its suitability to literacy and postliteracy campaigns.

• Radio has proved to be a successful broadcast medium when integrated with print and visuals and supported by organized study groups and tutors. One advantage is its flexibility of programing in different languages. Experiences of successful radio schools in Latin America represent important approaches for literacy and basic education.

• The choice of language to be used for literacy is of critical importance. Illiterates learn easier and faster when they receive instruction in their mother tongue. When they become competent and confident in their first language, they can transfer the skills to a second language, the entire process taking less time and being more permanent than learning literacy in a second language. However, in countries like Zambia where there are many languages and dialects, a literal application of this principle would lead to enormous costs and probably is not feasible economically. In other words, the choice of language is usually political as well as educational or pedagogical.

• Although literacy programs, like all development, should be endogenous, there is a large role for international action and cooperation. For example, the national program of literacy in Jamaica was significantly influenced by information visits of its personnel to MOBRAL in Brazil. Also international and regional organizations, such as the Organization for Economic and Co-operative Development, the Arab States, and the South-East Asia Ministers of Education Organization, can foster literacy by financing research, by disseminating research results, establishing standards and guidelines, making available trained organizers and other scarce personnel, and in some cases, developing educational materials.

• Recently, literacy has received greater universal attention, but the total investment in it is extremely small compared with other development projects. Much higher priority should be given to literacy, and organizations such as UNDP, IBRD, and UNESCO should reevaluate their expectations concerning what literacy can and cannot achieve in economic productivity. The funding for literacy programs in countries such as Cuba, Brazil, and Tanzania represents a strong commitment to the people and contrasts sharply with the rhetoric about educational entitlement by many governments, international agencies, and donor groups.

• Private finance has a role to play particularly in testing and in research that is not costly and yet is likely to improve literacy practices. In particular, it could be used to demonstrate proven incentives for literacy or to test uncertain ones. Some incentives that are known to be effective are hope and aspirations for a better life; a strong belief, cause, or faith; and peer acceptance. Other incentives should be examined and tested.

Applications and Implications for Adult Education and General Adult Learning Theory

• Successful literacy programs are based on a strong national adult education network with decentralized organization and a cadre of trained and experienced personnel.

• Such a network functions best when there is a national association, body, or agency for leadership and coordination in the formation of national

policies, organization and implementation of literacy provision, and definition of roles in literacy programs.

- No country can rely solely on the formal school system to achieve literacy or to meet the learning needs of its citizens; a national policy for adult education is a priority.
- Literacy reports from every country cite the lack of well-trained adult educators as a major obstacle to successful and sustained literacy achievement. A variety of skills and levels of expertise and different kinds of people are needed. Some of the necessary skills are for administration, planning, project management, research and evaluation, production and use of media, organization, supervision, and instruction.
- Little attention has been paid to the systematic training of literacy workers and supervisors. With notable exceptions, universities and teachers' colleges have not addressed themselves to the problems of literacy or to the training requirements of literacy workers. Even less attention has been paid to the recruitment and training of women as providers of adult literacy.
- Countries without national adult education associations or agencies can draw on the experience of other countries: they need a central organization with stature in policymaking to undertake literacy decisions. Through such national bodies, regional cooperation can be developed for training programs and for exchange of information.
- Literacy practice reinforces the interdisciplinary nature of adult and literacy education and the necessity to work with a range of agencies, personnel, and disciplines including linguists, social anthropologists, those involved in techniques of participatory research, workers' unions and cooperatives, personnel in health, agriculture, industrial enterprises, voluntary organizations, media, and library services.
- Literacy theory recognizes the primacy of ensuring that a program's goals, content, methods, and organization grow out of the needs, problems, and aspirations of learners. Adult-centred methods and learner-based content are two essential elements in successful literacy programs.
- Learner-based content and methods are accepted in theory, but they are rarely practiced because they require literacy personnel to consult systematically with learners and to base their practices on the learners' experiences, traditional culture, and perceptions.
- Much of the theory and practice encouraging learner participation in shaping the content and process of learning has been influenced by the ideas and methods of Paulo Freire. Of particular significance is his belief in the necessity of raising the level of consciousness of people about their ability to learn and to liberate themselves from oppressive circumstances. Freire's methods appear to speed up learning and comprehension, but they have not been thoroughly tested in different cultures and circumstances.

Applications and Implications for the Primary School System

Because primary schoolteachers are, and will continue to be, regarded as a major cadre for literacy teaching, the guidelines addressed to particular educational services also have relevance for the formal school system.

- Many schoolteachers have engaged in literacy teaching, and their experiences have significant (but rarely studied) implications for the formal

school system. Has retraining and literacy work affected their performance, attitude, and methods in the classroom? Has it caused them to reflect critically on their initial teacher training?

- Literacy training programs for schoolteachers and volunteers should be short and intensive, followed up by regular and practical in-service training and good supervisory support. This practice seems more effective and less costly than a long initial training with no or minimal in-service programs. Recurrent short-cycle training that gives prominence to intern and apprenticeship teaching and to interaction between teacher and learner has proved effective.
- In-service training should be decentralized through regional learning centres so that teachers will learn in a milieu close to the one in which they will work and so that prospective teachers and volunteers will have access to training.
- Criteria for recruitment and training of teachers differ widely but are increasingly affected by findings that the learners drop out less and are most willing to apply themselves when their teacher (a) knows the community, is accepted by parents and children, and (b) is matched with the goals of the program, such as the degree of technical, scientific, or vocational competence required.
- A major lesson from the literature on literacy is that schoolteachers should receive training in literacy work, in adult education techniques of participation and group interaction, and in learning theories related to adults. In addition, instructors in teachers' colleges should have had experience in literacy and rural-oriented programs.
- Teachers should be able to rely on regular and good supervisory leadership from supervisors who are trained in interpersonal relations and who know how to encourage and motivate teachers rather than intimidate them.
- Much more investigation is needed into the kinds of training required for teachers and other personnel to undertake literacy work. Similarly, there is need for comparative investigation into the effectiveness of teachers and other personnel, such as parents, in primary school and basic education.
- The many volunteer teachers and aides in literacy programs have been a testament to the rich resources of commitment and talent that can be tapped within local communities. Experience has shown that they are highly motivated if they receive initial and continuing professional support and if they are treated as equals with professional and other personnel.
- Some literacy programs have found that technical personnel are a better choice to teach functional literacy than are schoolteachers. Given training in literacy teaching, they become more proficient as teachers than do schoolteachers given training in technical tasks and literacy teaching. In other words, when technical or scientific knowledge is part of the teaching task, it is easier and more practical to train a technical person to teach literacy than it is to train a primary teacher to undertake both general literacy and technical tasks.
- A learner-centred, inductive method of teaching numeracy has proved successful with both children and adults, as has the teaching of reading and writing at the same time.
- More research is needed on reading that is applicable to Third World countries and on how special features of a language, such as its graphics, influence the time it takes to read and write.

• A commitment to teaching in the learners' mother tongue means the active recruitment of local people into teaching, close liaison with linguists, and use of locally oriented curriculum materials that originated from the language of instruction.

Applications and Implications for Nonformal Education

Although there is not complete agreement about the meaning of nonformal education, Philip Coombs' definitions, below, are widely used and apply to both children and adults.

> . . .*Nonformal:* For purposes of this study we define nonformal education as any organized educational activity outside the established formal system — whether operating separately or as an important feature of some broader activity — that is intended to serve identifiable learning clienteles and learning objectives. Examples applicable to children and youth would be: pre-school day-care centres and nurseries; school equivalency programs to provide a second chance for those who are missing schooling or dropped out early; adolescent and adult literacy classes; school-based extracurricular activities such as boy and girl scouts, young farmers' clubs, sports and recreational groups; and occupational training for adolescents in agriculture, construction, etc., carried on outside the formal school structure.
>
> *Informal:* By informal education we mean the lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment — from family and neighbours, from work and play, from the marketplace, the library and the mass media.
>
> For the most part, this process is relatively unorganized and unsystematic (hence the rubric 'informal'). Yet it unquestionably accounts for a very high proportion of all that any person — even a highly schooled one — accumulates in a lifetime (Coombs and Ahmed 1974, p. 1–12).

In developing countries, the most frequent application of nonformal environments and institutions is with illiterate adults. Therefore, although the terms nonformal and illiterate are not synonymous, they often describe or denote the same kinds of education, and personnel involved in nonformal education should refer to the guidelines about literacy education.

• A range of methods, primarily those that build on and use the experiences of the learner, have been denoted as "nonformal" in some of the literature. Effective "nonformal" methods should be used for literacy just as agencies and institutions of nonformal education should be hosts for literacy programs.

• Sports events and clubs, ethnic societies, vacation programs, folk culture, religious activities, indigenous social processes, etc., constitute opportunities for literacy learning and promotion. For example, in Cuba, workers are given work-study holidays and in Yugoslavia and India, polyvalent centres offer recreation and education.

• Graduates of literacy classes are excellent candidates for nonformal activities incorporating continuing education. They can be encouraged to play a leadership role in which their new skills of literacy and numeracy are put to practical use.

• Nonformal educational activities and agencies for adults should be perceived as part of the national system of education whether or not they are under governmental auspices.

• Because activities associated with radio are not dependent upon literacy, radio offers an accessible and informal network for information and dialogue. On-air listeners' queries and responses can be compiled into print and used as reading material for literacy classes and neoliterates. A regional example of such a network is the Central America Institute of Culture (ICECU) operating from Costa Rica.

Application to the Concept of Basic Education

Experiences in programs and policymaking for social, cultural, economic, and political development have helped define "minimum learning needs." The following observations summarize the contributions from literacy work.

• Basic education is a minimum standard or quality of education to which people of all ages and conditions are entitled. It should provide the competence necessary for an adult to live, work, and participate successfully in society, and it should be viewed as a flexible, but systematic, approach to learning within or outside the school.

• Basic education incorporates universal primary education, but it goes beyond that and beyond the traditional approaches to facilities, classes, and teaching.

• As an integral part of national development, basic education should be regarded as the first phase in lifelong education and of access to other educational activities, both formal and nonformal to improve skills, increase knowledge, and enrich personal growth. In this sense, it differs from the "fundamental education" of the 1950s, which connoted social welfare, was intended for the underprivileged, and was usually operated parallel with formal education.

• The principles for functional literacy, reviewed in earlier sections of this report provide the framework and experience for basic education, of which functional literacy is a component.

• The skills and knowledge in literacy should derive from and relate to adults rather than from the frame of reference of the primary school. A list of basic adult needs and correspondent learning needs should be developed and translated into objectives and procedures. Functional literacy programs have shown that learning is faster, more enjoyable, and better retained and applied when the skills, content, and teaching methods grow from the milieu of the learner.

• Successful literacy practice indicates that basic education need not mimic the timetable and graded performance associated with formal schooling and that it can be more in the nature of organized, regular opportunities for continuing and recurrent education, with competence recognized by certification equivalent to formal education. The implication from literacy experience is that groups respond well to a curriculum developed as modular units using clearly defined objectives and progressions based on inductive, life-related methods.

• Successful experiences with numeracy teaching show that the inductive approach is more effective than beginning with abstractions of multipli-

cations, additions, etc. The starting point should be mathematical facts taken from the learners' own experience — technical, occupational, or social — and should capitalize on the learners' skill in mental arithmetic and on the methods they have devised to perform such calculations. From tangible, life-related situations, the teacher can derive rules and formulas that illustrate the progression to abstract concepts and principles.

- How the special features of a writing system — its relationship with language, its graphics, etc. — influence the success of a particular teaching method has not been determined; however, experience indicates that learning to read at the same time as learning to write contributes to progress in both because they reinforce each other.
- Other findings from literacy practice and research are that responsibility in education programs should be decentralized and that local resources including personnel, culturally valid knowledge, and skills, should be incorporated into the programs. Although programs should strive to employ licenced teachers, the success of other people as teachers and aides has been amply demonstrated. Basic education should draw on volunteer "resource people" such as industrial workers, supervisors, farmers, artisans, artists, personnel from health and agricultural extension, young people, parents, and others from the community.
- Some elements of a basic education are: demonstrated competence in communication and the language arts of reading, writing, speaking, listening; demonstrated competence in basic arithmetic, especially as it relates to improvement in occupation and in employment (the learner may then move from subsistence to cash crop agriculture, new marketing and distribution arrangements, setting up of cooperatives); knowledge of one's country, culture, history; some understanding of geography and of the world; skills and knowledge for ensuring good health and nutrition, managing a household, raising a family, and securing employment and improved working conditions; sufficient competence for participating effectively in society as an individual and as a member of a community, attaining self-reliance and affecting change, understanding civic, legal, and political rights and responsibilities, forming attitudes based on critical judgment, and locating and using reading materials, library services, radio broadcasts, and pertinent audiovisual materials.

Research

Comparatively small amounts of money have been expended on research and development in literacy. Of course, much of the research in the general field of adult education is applicable to adult illiterates.

We have noted some results in literacy programs. Many came from single efforts that would bear replication in another culture or setting. We now list some research possibilities that are not costly and are within the range of workers in the field of literacy. Their outcomes may mean improved practice in literacy and other education programs.

Historical (to understand past successes):

- What were the factors that made possible complete literacy in Wales in the 18th century?
- What were the factors that explain the achievements of the Scandina-

vian countries in literacy in the 19th century? Were the countries equally successful and, if not, what caused the differences?

- How did approaches to literacy in France, Germany, Holland, and Switzerland compare in the 19th century?

National (to examine and understand specifics in recent successes):

- How has Cuba fought illiteracy starting with the situation in 1960, the campaign of the 1960s, and the second stage efforts since? (UNESCO evaluated the campaign in the early 1960s and could do a follow-up study.)
- Could an outside team examine the results in Burma, Somalia, and Vietnam? The campaigns in these countries have shown promising results, but the reports have come solely from self-examination.
- Could the Soviet government be persuaded to prepare a complete statement of its literacy efforts from the Revolution to the present? There is much that is unexplained or not treated in sufficient detail in records that exist in English or French. What were the precise difficulties and when were they encountered? Do pockets of illiteracy remain? What has been done systematically to maintain literacy? What changes in pedagogy have developed as a result?
- How do the objectives, ideology, methods, and results of literacy programs in Tanzania and Brazil compare?

Systems (to examine critically some systematic approaches to literacy learning):

- What are the differences in applications of Freire's methods in Latin America, Africa, North America, and how do results in different regions compare?
- What are the ideas and methods of functional literacy, and how were they applied (successfully or otherwise) in the Experimental World Literacy Programme?
- To what extent does the mass campaign by individualized teaching associated with Laubach's "each one teach one" have merit?

Organization (to examine and deepen understanding about organized activities and actors in literacy learning):

- What would system analysis show if applied to the approaches in countries such as Tanzania and Somalia, and campaigns, such as the adult literacy campaign in the U.K.? Although national will, government determination, and so on are crucial, are there special organizational circumstances? Socialist countries have achieved more records of success than governments where national "direction" is not so easy to achieve, but this record and the underlying reasons should be studied.
- What is the balance between centralization and decentralization and how is it developed and maintained? MOBRAL in Brazil claims to have achieved a balance, although some people dispute the claim. India's massive NAEP is decentralized; it uses nongovernment and government agencies, includes many languages, and involves logistics of numerical and geographical scale. The cases of Brazil and India could be examined, and other inquiries made, for practical guidelines to this overriding organizational concern of all literacy programs.

Projects (to examine some specific projects and identify principles and practices for wider application):

- What projects have had unusual success, and why? The radio schools in Latin America need to be studied and perhaps the development in Colombia, Honduras, Dominican Republic, and other countries, compared with that of "alternative" schools for children and youth as well as adults. Another example of special success stories is the trade unions' work in literacy in Iraq and Algeria.

Language Policy (to investigate problems and decisions associated with the choice of language for literacy instruction):

- That people learn literacy more quickly in their mother tongue is true, but is it true in somewhat equal measure for both children and adults?
- How best, and when, can learners move from the mother tongue to a national or international language?

Teaching and Learning:

- What training is needed by primary schoolteachers, technicians, vocational teachers, students, field officers, community leaders, trade unionists, etc., to prepare for literacy teaching?
- What recognition, payment, continuing education do teachers deserve?
- What motivates people to become teachers? What can be learned from experiences of Israel, Iran, Cuba, and Nepal, all of which have had interesting programs to promote teaching?
- How do men and women compare as teachers and in what circumstances is one group more effective than another?
- Do schoolteachers who undertake retraining and adult literacy work practice the newly learned methods and psychology when they return to teaching in the primary school?
- What are the in-service needs of unqualified teachers?
- Why have organized groups such as the trade unions in Iraq and Algeria been so successful in teaching illiterates both in urban and village settings?
- How can a village or local community be the focus and support system for literacy (the Gram Shikshan Mohim village literacy movement in India is an example)?
- To what extent was the enthusiasm for a new national language the chief motivating factor for literacy learning in Somalia?
- How can religion or ideology be used as foundation and support system for literacy?
- What are the appropriate roles for the media and which medium or combination of media is most effective for direct teaching, for motivation, for interpretation, for training of teachers?
- What are the principles and delivery systems of "open learning" in Western Europe, Scandinavia, Eastern Europe, and North America that can be applied to basic and nonformal education in developing countries?
- How are traditional cultural and folk activities such as puppets, drama, folk songs, dances, festivals, and art being used in various phases in literacy and numeracy teaching/learning?

- What are the major societal attitudes and pressures that inhibit women and girls from achieving literacy?
- What can be done to encourage women and girls to explore their learning capabilities?
- What studies have already been done about motivating women and girls?
- What are the best ways to train rural women for leadership in literacy motivation and teaching within their own community?
- What are the results of training programs for women in India, El Salvador, Tanzania, Iran, the African Women's Training Centre in Ethiopia, the Asian and Pacific Centre for Women and Development in Bangkok? Do the programs differ (and how) from those developed for men?
- What experiences have illiterates and new literates had in literacy programs?
- What has literacy meant to new literates' lives?
- How have new literates continued their learning? A possible approach to this question is to obtain simple statements, "diaries," and reflective materials produced by and from new literates in a number of countries and analyze them for their bearing on learning theory, motivation, literacy methods, postliteracy needs and activities, etc. Some such materials already exist and these can be collected for analysis and further reflections could be gathered through tape-recorded interviews.

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Part 3

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